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LIFE PATH AS A PREDICTOR
OF PERFORMANCE IN THE NAVY:
A LONGITUDINAL STUDY.
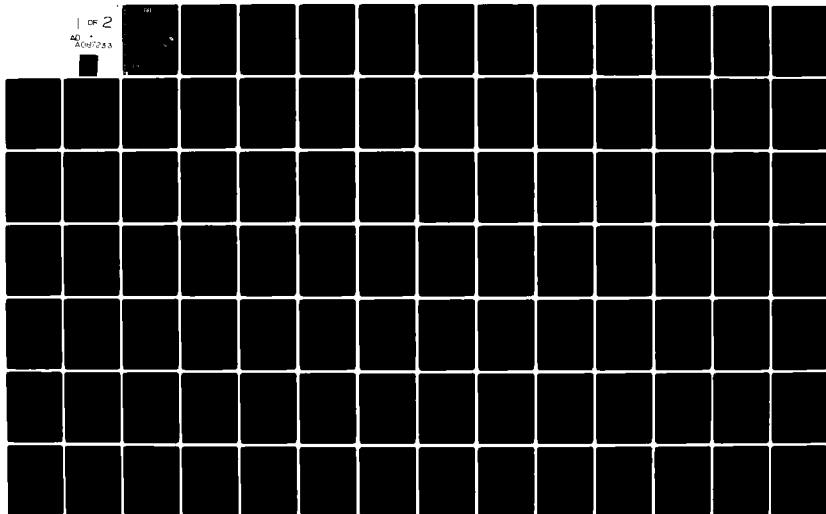
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FINAL REPORT.

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This study involved the follow-up of 1500 recruits at the Navy Recruit Train-
ing Centers during the early part of 1977, and the collection and analysis of new
data on the 750 first-term enlistees stationed at three Naval air stations during
the spring of 1978. The purposes of this study were to further refine the LPQ and
instruments which had been previously developed to measure military performance;
and to determine the extent to which the LPQ was related to attrition and perfor-
mance among the 1977 recruit sample, and performance among the 1978 air station
respondents. We were limited to the master personnel file in our measure of per-
formance among the 1977 recruit sample; however, for the 1978 air station sample
we were able to obtain supervisors' evaluations and information from the personnel
jackets of the respondents regarding their military performance.

As a result of the study it was found that we could reduce the number of items
in constructing the LPQ scales while at the same time increase explanatory power of
the scales. The LPQ scales were shown to have significant relationships with both
attrition and job performance. However, not all the items which had a significant
effect on attrition had a significant effect on job performance, and in turn, not
all the items which had a significant effect on job performance had a significant
effect on attrition. Some items had a significant effect on both attrition and
performance. Attrition and job performance appeared to be distinct phenomena. The
reasons why an individual left the Navy were not necessarily the same reasons for
poor job performance. Different LPQ scales were constructed for predicting attri-
tion and job performance.

The effects of the LPQ scales were found to be independent of the effects of
other variables used to predict attrition and job performance, (e.g., SCREEN Score,
AFQT, education, etc.). The LPQ was found to predict attrition equally as well as
the SCREEN Score; however, the SCREEN Score did not predict job performance. This
was consistent with our view that attrition and job performance were distinct phen-
omena. Using the LPQ pool of items, a separate set of scales were developed which
do predict job performance.

The LPQ yielded six scales which measured pre-military personal development and
relationships with others. The six scales were termed Family Relationships, Early
Maturity, Personal Competence, Adaptability, Vocational Maturity, and Authority Fig-
ures. The items of these scales which were derived from the LPQ pool of items sug-
gested the following:

A. Family Relationships

- Persons who were at the extremes in their relationships with their parents did not stay in and adjust well to the Navy.

Persons who "ran away from home" were likely to "run away" from the military. The item "Ran Away from Home" was found to be a significant predictor of attrition. If one had adopted a pattern of "escape" in dealing with problems prior to joining the Navy, it was possible that this pattern may persist after one got in, and was utilized as a technique of dealing with problems.

Other family items which measured negative qualities of one's family relationships tended to be related to job performance. Such items were: "Difficulty Communicating with Parents," "Stayed Away from Home," and "Got Mad at Parents."

Being away from one's family for a long period of time may have been too much for some persons to take. This was especially the case for those who were very close to their family. Unexpected results revealed such patterns. The item "Worked on Projects with Family" was found to have an inverse relationship with attrition; and the items "Doing Something with Parents" and "Parents Included Me in Discussion" were found to have an inverse relationship with measures of job performance.

- Persons whose parents were separated or divorced did not stay in and adjust well to the Navy.

The item "Parents Separated/Divorced" was significantly related to both attrition and job performance.

B. Early Maturity

- Persons who had early responsibilities tended not to attrite as much as those who did not have early responsibilities.

We learned that persons who at an early age planned the courses they took in high school, attended summer camp, received a driver's permit, and budgeted their own money, had lower rates of attrition than other persons.

- Persons who began driving and those who bought a car at an early age did not attrite as much as those who did not have such experiences; however, although they tended to stay in the Navy, they did not perform as well as others.

The items "Received My Driver's Permit" and "Bought My First Car" were inversely related to performance measures and to attrition. Seemingly, we were identifying a class of persons who viewed the military as an acceptable option for employment, but did not possess the personality to adjust well to military life.

C. Personal Competence

- Attrition was related to both reading ability and reading interest.

Persons who indicated they were good readers did not attrite as often as those who indicated otherwise. Moreover, persons who indicated they read newspapers and science fiction did not attrite as much as others. On the other hand, persons who were able to read when they entered first grade, and those who tended to read nonfiction books, tended to attrite more often than others. Seemingly, persons who had been reading for a long part of their life, and those who had academic reading interest, tended to attrite.

- Persons who had interest in and frequently went boating prior to joining the Navy did not adjust well to the Navy.

Recruits learned that the Navy was not all fun and games, and they may not have been able to recreate the excitement they once had in boating. Such experience may have led to enlistment in the Navy. It was found that such experiences were inversely related to military advancement.

- Persons who read science fiction tended not to attrite as much as others, however, they did not perform their responsibilities as well.

The item "Read Science Fiction" was inversely related to attrition and to the measures of military performance.

- Persons who had such cultural experiences as going to see plays had a higher quality of military performance than other persons.

D. Adaptability

- Persons whose parents had friends of a different race, and were encouraged by their parents to have friends of different races, did not attrite as much as others, and tended to have a higher quality of military performance than others.

- Persons who played a musical instrument, and did volunteer work, had a higher rate of military advancement than others.

- Persons who made new friends frequently before enlistment, and had contact with other racial groups tended to have a higher level of military performance than others.

- Persons who were very sociable and had a large number of friends did not perform as well in the Navy as those who preferred to work alone and had few friends.

Because one would come into contact with persons of different racial groups when one entered the Navy, we learned that those persons who had parental support

in meeting and interacting with persons of different racial groups did not attrite as much as others. We learned that persons who made friends easily did well. However, there was a point at which sociability interfered with quality of performance. Persons who had many friends, as indicated by the number of persons of a different racial group, and viewed themselves as having no problems fitting in with others, did not get performance evaluations as high as others. Seemingly, we were identifying here persons who were more concerned about popularity and social relationships than quality performance.

E. Vocational Maturity

- Attrition was highly predicted by an enlistee's expectations relating to military service and not his/her prior experiences related to such service; on the other hand, quality military performance was highly predicted by an enlistee's prior experiences related to military service and not his/her expectations regarding such service.

Seemingly, persons who joined the Navy with a set of definite expectations did not attrite as much as others. We were unable to predict how well one would perform on the basis of one's performance. However, we were able to use the relatedness of prior military experiences to that done in the military as a basis for such a prediction.

F. Authority

- Persons who had a pattern of problems with school personnel while in school prior to joining the Navy tended to attrite more or did not perform as well as others.

- Persons who were hassled by their parents prior to joining the military did not attrite or have a lower rate of attrition than others.

- Persons who had adopted negative attitudes toward the police did not perform as well as others.

- Persons who frequently drag raced or tended to have a generally uneasy feeling when dealing with authority figures did not perform well in the Navy.

These patterns illustrated that one's ability to adjust to and perform well in the authority system of the Navy would depend, in part, upon one's perceptions of, and interactions with, persons of authority prior to joining the military.

The findings of this study suggest that the LPQ can be a useful diagnostic tool in identifying persons who would be likely to attrite or have substandard performance. Counselors and trainers may be able to improve their understanding of such persons, and assist them in having a successful military career.

INTRODUCTION

The move to the all volunteer force has led to the review of traditional pro-
cedures for recruiting and training military personnel. The United States Army has
been examining both new combinations of traditional criteria, as well as the ex-
ploration and evaluation of new and different criteria. These efforts have led to
the Military Aptitude Predictor (MAP) index and the Early Experience Questionnaire
(EEQ) (Bell, Kristiansen, & Seeley, 1974; Frank & Erwin, 1978). The United States
Navy, in the Life Path research conducted by Richard A. Gibboney Associates, has
also been making important contributions to the identification of nontraditional
predictors of quality military performance. In Phase I of this research, the
Life Path Questionnaire (LPQ) was developed (Gaymon & West, 1976), and in Phase
II, the LPQ was administered to over 1500 Navy recruits and related to their per-
formance in recruit training (Gaymon, 1977).

This report presents the findings of the main thrust of Phase III of the Life
Path research, a longitudinal study of the over 1500 recruits participating in
Phase II of the research, and a cross-sectional study of a group of enlistees in
their first term of enlistment.

Phase I and Phase II Research

Phase I research was designed as a feasibility study to develop instruments
capable of measuring the interface between the individual and social institutions
and the performance of military personnel. In Phase II the instruments developed
were applied to 1552 recruits at the three Navy Recruit Training Centers. Six LPQ
scales consisting of a total of 124 items emerged from these analyses. The six
scales measured relations with authority figures, family relationships, personal
competence, adaptability, early maturity, and vocational maturity. Of the six
scales, the scale measuring relationships with authority figures was found to have
the highest degree of relationship with measures of recruit performance, and the
scale measuring vocational maturity was found to have the next highest relationship.
Overall, the results of Phase II indicated that the amount of variance in recruit
performance explained by the six scales was small. However, the research did iden-
tify key areas in which the Navy could invest counseling and remedial efforts which
might enhance the performance of recruits and, in all probability, contribute to
lowered attrition and more effective performance.

Objectives of Phase III

Natural questions evolving from the Phase I and the Phase II research were:

1. How well can the LPQ predict attrition as well as job performance among the recruit cohort of Phase II?

2. How well can the LPQ distinguish among enlistees in their first tour of duty who qualify for reenlistment and are doing well in their duty assignment from enlistees who do not qualify for reenlistment and/or are not doing well in their duty assignment?

The objective of Phase III was to provide answers to these two questions. In the process of providing these answers, the LPQ was further refined, and measures used to ascertain the quality of the performance of the enlistees were further developed.

The LPQ consisted of 124 items. The items were directed at activities, feelings, and interests which respondents had _prior_ to enlistment in the Navy. In most instances, the information centered around the respondents' high school years. The 124 items were organized in the six scales: Family Relationships, Early Maturity, Personal Competence, Vocational Maturity, Adaptability, and Authority Figures.

Reorganization of Items in Scales

We began our analysis with a critical examination of the items included in the six LPQ scales. This examination led to the reorganization of the items and the development of subscales in order to maximize both the face validity and predictive utility of the scales.

The Family Relationship Scale

The Family Relationship scale had twenty-one items which were organized into five subscales: Family Structure, Time Home, Supportive Relationships, Strained Relationships, and Family-Friends. The questionnaire items which were in these subscales were:

- Family Structure
  - Q 41. My parents were separated/divorced.
- Time Home
  - Q 15. Number of hours per _week_ I typically spent doing something with one or both of my parents.
  - Q 20. Number of evenings in a typical _week_ I spent with my family.
  - Q 25. Number of times I ran away from home because conditions at home were so bad.
  - Q 43. I stayed away from home as much as possible.
  - Q 75. I stayed home only when there was nothing else to do.
- Supportive Relationships
  - Q 19. Number of times _during the last year of high school_ I did something special for one or both of my parents.
  - Q 46. I usually discussed important personal matters with one or both of my parents.
  - Q 58. My parents valued my opinions.
  - Q 72. My entire family was very close to one another.
  - Q 74. From an early age, my parents included me in their discussions.
  - Q107. Work on project with parents.
  - Q112. Visit relatives.

- Strained Relationships

    Q 16. Number of hostile arguments per <u>year</u> which I estimate my parents usually had.

    Q 64. My parents wanted me to go to college, but I didn't intend to go.

    Q 65. I had a lot of difficulty communicating with my parents.

    Q106. Hassle with brothers and sisters.

    Q111. Get mad at parents.

- Family-Friends

    Q 30. Number of friends of my parents that I felt very close to.

    Q 31. Number of my friends which my parents disapproved of.

    Q 48. The active participation in community affairs of one or both of my parents influenced me to do the same.

Early Maturity Scale

The Early Maturity scale consisted of fifteen items. However, one item, "Age Decided on a Career in the Navy," was eliminated from the original scale, because of apparent ambiguity concerning the word "career" and because of its poor response rate. Three subscales were created from the remaining items: Early Home Independence, Early Institutional Involvement, and Early Driving. For the most part, the questionnaire items included ascertained the age at which the respondents did various things. The questionnaire items were as follows:

- Early Home Independence

    Q 1. Started setting my own hour for coming in at night.

    Q 4. Took a lengthy trip (one week or more) away from my parents.

    Q 5. My parents allowed me to date for the first time.

    Q 6. Became responsible for planning and following my own time schedule.

    Q 8. My parents first began to leave me at home on my own.

    Q 10. Felt my parents stopped treating me like a child.

- Early Institutional Involvement

    Q 2. Took responsibility for planning the courses I would take during high school.

    Q 3. First attended a summer camp (Scouts, YMCA, etc.).

    Q 11. Began working regular part-time jobs.

    Q 12. Became responsible for budgeting my own money.

    Q 13. Opened my own checking account.

    Q 33. Number of offices to which I was nominated during my <u>junior high school years.</u>

- Early Driving

    Q 7. Received my driver's permit.

    Q 14. Bought my first car.

Personal Competence Scale

The Personal Competence scale items were organized into four subscales: Academic Orientation, Reading, Culture, and Sports. There were a total of twenty-one items in these subscales. They were:

- Academic Orientation

    Q 37. I avoided taking difficult subjects.

    Q 79. School learning came easy to me.

    Q103. Write letters.

- Reading

    Q 36. I spent a lot of time in the library.

    Q 45. I was a good reader when I was in high school.

    Q 50. I could read when I entered first grade.

    Q 81. I spent a lot of my time reading.

    Q102. Go to libraries.

    Q104. Read newspapers.

    Q115. Read nonfiction books.

    Q121. Read novels.

    Q122. Read editorials.

    Q123. Read science fiction.

- Culture

    Q 99. Attend classical concerts.

    Q101. Visit museums.

    Q105. Go to see plays.

    Q120. Do gardening.

- Sports

    Q 68. I was a very good swimmer.

    Q100. Participate in athletics.

    Q109. Go boating.

    Q118. Go swimming.

Vocational Maturity Scale

The Vocational Maturity scale was divided into two subscales: one consisted of seven items, Career Preparation; and the other, Career Expectation, consisting of eleven items. The questionnaire items were:

- Career Preparation

  Q 9. Decided on a career in the Navy.

  Q 26. Number of hours per _week_ I spent doing assigned chores around the house.

  Q 28. Number of hours per _week_ I spent (outside of school) on school work.

  Q 53. I made my best grades in math and/or science.

  Q 88. I was well acquainted with the educational requirements of my chosen profession.

  Q 89. I had prior training in the skill area which I expected to pursue in the Navy.

  Q 92. I possessed a skill in which the Navy expressed an interest.

  Q 93. I tried to learn as much as I could about the Navy before joining it.

- Career Expectation

  Q 38. I was confident of my ability to succeed.

  Q 84. I had heard that Navy schools are good and have good instructors and training equipment.

  Q 85. I thought the Navy would provide the proper atmosphere for me to utilize my skills.

  Q 86. On the basis of my interview with the Navy recruiter, I was able to explore both good and bad points of a Navy career.

  Q 87. I felt that the Navy would enable me to perform duties which would give me self satisfaction and a sense of accomplishment from my work.

  Q 90. I had definite career objectives which I hope to achieve in the Navy.

  Q 91. I was promised an advanced rating after I completed boot camp.

  Q 94. I felt the skills I am expected to learn in the Navy will help me in civilian life.

  Q 96. I anticipated attending Navy schools that would prepare me very well for my first duty assignment.

  Q 97. I felt if I were selected to attend an advanced school, the Navy would train me in the fundamentals necessary for success in the advanced school.

  Q 98. I felt confident that the Navy schools I planned to attend would make me a highly skilled person.

Adaptability Scale

The Adaptability scale yielded five subscales: Group Activities, Parental Model, Group Leadership, New Experiences, and Sociability. Twenty-two items were contained in these subscales. They were:

- Group Activities

  Q 22. Number of different extra curricular activities (student council, drama, sports, etc.) I participated in.

Q 24.   Number of different school activities I participated in <u>my first year of high school</u>.

Q 83.   I had a lot of experience working in a team effort to achieve group objectives.

Q116.   Do volunteer work.

● Parental Model

Q 44.   My parents encouraged me to make friendships with people of different social levels.

Q 51.   My parents had friends of other racial groups.

Q 60.   My parents encouraged me to form friendships among people of other ethnic/racial groups.

● Group Leadership

Q 40.   I was frequently the one who initiated group activities among my close friends.

Q 42.   I was among the first students to learn of significant events occurring in my high school.

● New Experiences

Q 27.   Number of hours in a typical <u>week</u> I spent watching T.V.

Q 55.   I was interested in learning the customs and life-styles of people in other countries.

Q 70.   I usually felt confident in dealing with new situations.

Q119.   Make new friends.

Q124.   Travel out of town.

● Sociability

Q 29.   Number of other high schools in my area which I visited during my last year of high school.

Q 32.   Number of friends of another racial group which I had.

Q 47.   I felt more comfortable working alone on projects.

Q 56.   I had very little or no contact with people from other ethnic/racial groups.

Q 95.   I feel that after my early Navy schooling I will have no trouble fitting into the crew of my first duty assignment.

Q108.   Participate in school politics.

Q114.   Go to movies.

Q117.   Play a musical instrument.

Authority Figures Scale

The Authority Figures scale was divided into four subscales: Parents, Teachers, Police, and General Authority. Twenty-seven questionnaire items were used. These items were:

- Parents

  Q 39. My parents often hassled me for not doing things I was supposed to do around the house.

  Q 54. I usually resented discipline from my parents.

- Teachers

  Q 17. Number of teachers who had a positive influence on my development.

  Q 18. Number of times I was put out of classes by teachers.

  Q 21. Number of times I was expelled/suspended from high school.

  Q 23. Number of disputes I can recall having with school officials (principals, teachers, etc.) during my total school career.

  Q 52. I felt school officials showed little sensitivity to the real needs of students.

  Q 57. I had trouble working under strict supervision from teachers and/or employers.

  Q 62. I felt teachers gave me the grades I earned.

  Q 63. I felt most high school principals would fail at any other job.

  Q 67. On more than one occasion I was treated unfairly by a school principal.

  Q 71. I felt most students didn't show proper respect for authority.

  Q 76. Teachers generally treated me fairly.

  Q 78. I felt excluded from some school activities.

  Q 82. I felt that school officials had to be forced to accept change.

  Q110. Argue with teachers.

- Police

  Q 34. Number of citations for moving traffic violations I received before enlistment.

  Q 59. I felt it was best not to trust police.

  Q 61. I felt most policemen abused their authority.

  Q 69. I felt most police used unreasonable force.

  Q 73. I felt police often hassled kids for no good reason.

- General

  Q 35. Number of jobs which I quit because of unsatisfactory relationships with my boss before enlistment.

  Q 49. I generally resisted being bossed around.

  Q 66. I found it difficult to relax with people who had authority over me.

  Q 77. I used marijuana on at least three occasions.

  Q 80. I felt most clerks in retail stores were not very nice to customers.

  Q113. Drag race.

Scoring the LPQ Scales

As part of a pilot study, alternative techniques of scoring the LPQ scales were evaluated. The original scoring procedure involved the computation of average percentile rank of the items included in the scales. During this project the original procedure was compared to that of using standard scores. The two techniques of computing the scales yielded scores with different statistical properties. Since percentile scales, unlike standard scores, are not linear transformations of raw scores, standard scores are generally preferred and were used in the present study. The following formula was used in the computation of the scales based on standard scores:

$$\text{Scale score} = \frac{\Sigma(x-\bar{x}/s)10 + 100}{N}$$

Where,

x = the value of the item,
$\bar{x}$ = the mean value for all respondents,
s = the standard deviation of the values, and
N = the total number of cases.

This procedure yielded standard scores with a mean of 100 and a standard deviation of 10. (NOTE: item Q9 was excluded from the scoring and analysis due to inconsistencies in the interpretation of the item by the respondents.)

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THE RECRUIT BEHAVIOR CHECKLIST

The original Recruit Behavior Checklist consisted of 50 items, plus an over-all evaluation of performance on a ten-point scale ranging from poor to outstand-ing. As part of the current research effort, this checklist was revised. The checklist was reduced to ten items and two overall five-point evaluation scales: one measuring the performance of an enlistee which compared to other enlistees of similar rank; and the other measuring the reenlistment potential of the enlistees. Supervisors completing the form were requested to evaluate the enlistee in terms of these two overall measures, and to indicate whether the enlistee "never," "rarely," "sometimes," "often," or "always" performs the behavior specified in the ten items. This instrument was found to be more practical and easier to ad-minister than the original instrument, and just as useful in measuring the per-formance of the enlistees. A copy of the revised instrument follows.

Enlistee's Name _____

Social Security Number _____ Date Completed _____

Duty Station _____ Activity _____

Name and Title of
Completing Officer _____

Please evaluate the above named enlistee according to the items listed
below by checking the appropriate box on the right.

	Never	Rarely	Sometimes	Often	Always	Not Observed	
1. Demonstrates good problem solving skills.	☐	☐	☐	☐	☐	☐	
2. Resists authority.	☐	☐	☐	☐	☐	☐	
3. Completes assignments on time.	☐	☐	☐	☐	☐	☐	
4. Needs prodding to perform.	☐	☐	☐	☐	☐	☐	
5. Works well with others.	☐	☐	☐	☐	☐	☐	Index of Over	Evaluation
6. Fails to meet standards of dress and appearance.	☐	☐	☐	☐	☐	☐	
7. Does more than is required.	☐	☐	☐	☐	☐	☐	
8. Has been given non-judicial punishment.	☐	☐	☐	☐	☐	☐	
9. Is poised and self-assured.	☐	☐	☐	☐	☐	☐	
10. Receives respect from co-workers.	☐	☐	☐	☐	☐	☐	

	Poor	Marginal	Average	Good	Out-standing	
11. In comparison to all the enlistees you have supervised in the particular job and grade level of the above enlistee, how would you rate his/her performance?	☐	☐	☐	☐	☐	Rating Index
12. How would you rate this enlistee in terms of his/her qualifications for reenlistment?	☐	☐	☐	☐	☐	Index of Reenlistmen Potential

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Data Analysis Design

How well can the LPQ predict attrition and the quality of job performance among the recruit cohort in Phase 1? Our approach to answering this question was as follows. First, we identified possible criterion measures, and obtained such measures from the recruit sample. Second, through a series of correlation and regression analyses we sought to maximize our prediction of attrition and job performance. Third, we sought to determine whether any observed effects of the LPQ on attrition and job performance would be maintained once traditional predictors of attrition were controlled.

The Criterion Measures

In identifying possible criterion measures for the longitudinal sample, we were limited to those data regularly kept on the Naval master personnel tapes. We were unable to obtain supervisor evaluations of the recruits after they left training school since such data were not maintained on the personnel tapes. However, we were able to determine which of the 1977 survey recruits were still in the Navy as of July, 1978; and which ones had left the Navy, as well as the reasons for their separation. Moreover, for those who left the Navy, we obtained information from the personnel tapes as to whether or not they had been recommended for reenlistment. Given that the recruits had begun their Naval careers at approximately the same time, their grade level as of July, 1978, provided a crude measure of their success or failure in meeting the requirements for advancement. Attrition and grade level were combined to form an index of military advancement.

The Correlation and Regression Analyses

Correlation and regression analyses were the principal statistical techniques employed in this study. We proceeded systematically through six stages (see Table 1). The first stage (Stage 1) consisted of the computation of zero-order correlations of the LPQ items and the criterion variables. Pearson's product-moment correlation was used. This analysis identified those items which had significant relationships with the criterion variables when other variables were not controlled.

The following stages (Stages 2 through 6) involved the use of multiple regression analysis in order to isolate the items which had significant effects on the criterion measures once other items were controlled. In Stage 2 the items within each subscale of the LPQ scales were combined into a single regression model and

TABLE 1

Stages of Study Analysis Design

Stage	Analysis Performed	Purpose
Stage 1	Zero-order correlation of all items with the criterion variables.	Identify items with significant zero-order effects on criterion variables.
Stage 2	Stepwise multiple regression of criterion variables on models composed of all items in the subscales.	Identify for each subscale, those items which have significant effects when other items within the subscale are controlled.
Stage 3	Stepwise multiple regression of criterion variables on models composed of all the significant subscale items in Stage 2 for each scale.	Identify for each scale, those subscale items which are statistically significant when other items in the scale are controlled.
Stage 4	Stepwise multiple regression of criterion variables on models composed of all subscales which are found to have significant effects in Stage 3.	Identify those subscales which are statistically significant when the subscales of other scales are controlled.
Stage 5	Multiple regression of the criterion variables on models composed of the final LPQ scales. These scales consist of those subscales which are found to be statistically significant in Stage 4.	Measure the effects of the final LPQ scales.
Stage 6	Multiple regression of the criterion variables on models composed of the summary LPQ score and other factors traditionally used as predictors of military success.	Measure the relative effects of LPQ and traditional predictors of military success.

the criterion measures regressed on these models using stepwise multiple regression. In this stage the items in each subscale which had significant effects on the criterion variables when the other subscale items were controlled were identified.

In Stage 3, all subscales with significant items were combined in a single regression model for each LPQ scale. Using stepwise regression, the criterion variables regressed on models so constructed. For each scale, therefore, those subscales which had significant effects, when other subscales in the scale were controlled, could be identified.

All subscales found to be statistically significant in Stage 3 were combined in a single regression model in Stage 4, and the criterion measures regressed on this model. This was the first time in the study subscales from different scales were analyzed together in the same regression model. Again, stepwise regression was employed. We sought to identify those subscales which were statistically significant when subscales of other scales were controlled.

The components of the final LPQ scales were those subscales which were found to be statistically significant in Stage 4. These subscales were added together in Stage 5, and the criterion variables were regressed on a model consisting of the resulting six LPQ scales.

In Stage 6, the LPQ scales were combined to form a single LPQ score. The zero-order correlation of this score and the criterion variables were computed, and the independent effects of LPQ, when considering other factors, were analyzed utilizing multiple regression.

Findings

The Criterion Measures

Attrition. Approximately 18 months after the 1977 recruits left the Recruit Training Center, approximately 24 percent of them had left the Navy. Most of those who left the Navy did so because of a behavioral or personality problem (see Table 2). It was not expected that the LPQ would be able to predict who would leave because of a physical disability or because of hardship. However, it was thought that the LPQ could predict separation from the Navy due to behavioral and personality reasons. In measuring attrition, all enlistees who were still in the Navy were assigned a code of "0". Enlistees who left the Navy because of a reason related to failure to adapt and were not recommended for reenlistment were assigned a code of "1". All others were assigned a missing data code, and not included in the analyses. This category included 70 persons (see Table 3). Fifteen percent of the 1977 recruits

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TABLE 2

Distribution of the 1977 Navy Recruit Respondents
Separated from the Navy by July, 1978
by Reason for Separation

Reason for Separation	Number	Percent
Personality disorder	73	24.1
Inaptitude	70	23.1
Inducted in error	39	12.8
Defective attitude	30	9.9
Physical diability	21	7.0
Fraudulent conduct, discreditable nature	15	5.0
Homosexual	11	3.6
Fraudulent enlistment	10	3.2
Drug abuse	7	2.3
For the good of the service	5	1.7
Inability to adapt	4	1.3
Authorized program	2	.7
Convenience of the government	2	.7
Failure to receive commitments	2	.7
Substandard personal behavior	2	.7
Temporary disabled list	2	.7
Alien	1	.3
Convicted by civil court	1	.3
Expiration of term	1	.3
Hardship	1	.3
Other	4	1.3
Total	303	100.0

Table 3

Reenlistment Status of Attritee for the 1977 Navy Recruit Respondents

Reenlistment Status	Number	Percent
Attritees Not Recommended for Reenlistment:		
• Behavioral or personality attritee not recommended for reenlistment	233	15.0
• Other attritee not recommended for reenlistment	8	0.5
Attritees Recommended for Reenlistment:		
• Recommended for reenlistment but ineligible because of disqualifying factor (e.g., erroneous induction or enlistment, physical disability, alien, etc.)	62	4.0
Non-Attritee	1249	80.5
TOTAL	1552	100.0%

comprised the behavioral and personality attrition category as defined above. Eight percent of the recruits constituted the non-attrition category.

Index of Military Advancement. The Index of Military Advancement was developed to add further refinement to the data analyses. This index provided a means for evaluating the attrition regression results, and added another dimension to the study. Employing this instrument, we were able to determine the extent to which the LPQ was able to predict whether or not an enlistee advanced "normally" through the Navy. Although some recruits began at an advanced level due to college education, it was assumed that the enlistees who were above the mean of the index were more successful in satisfying criteria for advancement than the enlistees below the mean of the index.

Combining attrition and grade level, a distribution of the 1977 recruits according to their July, 1978, level was developed (presented in Table 4). The index

Table 4

Index of Military Advancement for 1977 Navy Recruit Respondents as of July, 1978

Index of Military Advancement	Number	Percent
1 Attritee	233	16.6
2 E1	115	8.2
3 E2	766	54.5
4 E3	171	12.2
5 E4	120	8.5
TOTAL	1405	100.0%

scores ranged from "1" to "5". The attritees were given the score "1"; they comprised about 17 percent of the respondents with an index score. Eight percent of the respondents were assigned the score "2"; they were respondents who were at the E1 grade level as of July, 1978. Over half of the respondents were at the E2 grade level; they were assigned an index score of "3". Twenty-nine percent of the respondents were at the E3 and E4 grade levels.

Correlation and Regression Analyses

Following the analysis design described above, correlation and regression analyses were used to determine the predictive utility of the LPQ items. In developing the LPQ scales we wanted to exclude those items which had no relationship with the criterion variables. Those items which did not have significant relationships with the criterion variables were generally excluded from the scales. The results of these analyses are described below.

Stage One: Correlation of the LPQ Items with the Criterion Measures. The results of the correlation of the LPQ items with attrition and military advancement are presented in Appendix A.

Less than half of the LPQ items had a statistically significant zero-order correlation with these variables. Forty of the items had a significant correlation with attrition, and 57 items had a significant correlation with military advancement. The scales which seemed to have the strongest relationships with the criterion measures were Vocational Maturity and Authority Figures.

It was expected that the LPQ items would have an inverse relationship with attrition and a direct relationship with military advancement. For the most part, this pattern held up; however, in some cases the opposite pattern was found. The relationships opposite to those expected may not have held up once other variables in the subscales were controlled.

It was possible that the zero-order correlations of the LPQ items with the criterion measures were influenced by the correlation of related items. For this reason the results of the correlation analyses were not used as a basis for excluding items from the scales. Multiple regression was used instead. The results of the multiple regression analyses are described below.

Stage Two: Regression of Criterion Variables on Models Composed of Subscale Items. Stepwise multiple regression was used to identify for each subscale those items which had significant effects on attrition and military advancement when controlling the other items of the subscales. In this stepwise regression procedure, items were added to the regression models one at a time until the number

of items with statistically significant effects on the dependent variable was maximized, and the number of items with statistically insignificant effects on the dependent variable minimized. (Listings of the items included in the final subscale regression models for attrition and for military advancement are presented in Appendix B.)

As found for the correlation analyses, there were some items which were predictive of attrition but not of military advancement, and items which were predictive of both. This indicated that to maximize the predictive utility of the LPQ for both criterion variables, an attrition LPQ scale would be needed for predicting attrition, and a military advancement scale would need to be developed for predicting military advancement. This was done in the present study, and separate analyses were made for attrition and military advancement.

The regressions performed at this stage of the analyses succeeded in identifying items which did not have significant effects on the criterion variables once similar LPQ items were controlled. This made it possible for us to reduce the number of items to be included in the scales, and thereby made the LPQ more efficient.

Contrary to that expected, the correlation analyses revealed that a number of items had a significant relationship with the criterion variables. Some of these relationships were maintained after related items were controlled. In combining the subscale items to derive a total subscale score, items with effects in the opposite direction expected were not included in the computation of the total subscale score. These items were either combined together where theoretically permissable or treated singly in the following regression analyses. We wanted to further test the strength of the items before recoding them for inclusion in the total scale score. Unweighted means of the items in the subscales were used as the total subscale scores. The formula used in developing the subscale is in the Appendix C.

Three items in the Family Relationships scale effected either attrition or military advancement which were not expected. It was originally expected that the more positive and supportive one's family relationship, the better one's adjustment to the Navy. However, we found that this was not necessarily so. The items V20, Evenings with My Family; V108, Visited Relatives; and V115, Worked on Projects with Parents, were directly related with attrition and inversely related with military advancement. It was suggested that persons with very close relationships with their family tended to leave the Navy before their term of enlistment expired; and that some personality and behavioral problems which led to

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dismissal from the Navy were attributed to the sudden effects of losing very close contact with one's family.

It was evident that not all familial supportive relationships made for good adjustment to the military. Seemingly, the items in the Supportive Relationships subscale which had effects opposite to those expected related to interaction with family members and involvement on projects. A new subscale, Family Projects, was developed consisting of those items found to be statistically significant during this stage of analysis. For attrition, this subscale included only V113, and for military advancement, this subscale included V108 and V113.

Two of the Early Maturity scale items had an effect on attrition which was opposite of that expected: V1, Setting Hour for Coming in at Night; and V33, Offices Nominated in Jr. High School. Three of the Early Maturity scale items had an effect on military advancement which was opposite to that expected: V1, Setting Hour for Coming in at Night; V5, Date for the First Time; and V11, Regular Part-time Job. Some kinds of early experiences were directly related to dismissal from the military before one's tour of duty had been completed, and inversely related to "normal" advancement in the military. The data indicated that early social experiences would fall in this category. Persons who were socially active at a very early age tended to attrite from the military and were not promoted as often as persons who were not as socially active. The items V1 and V5 were combined to form a subscale of Early Social Experiences.

Among the Personal Competence scale items which had opposite effects on attrition were V51, Read when Entered First Grade; V120, Read Nonfiction Books; and V105, Went Boating. For military advancement the following items had effects opposite to those expected: V109, Wrote Letters; V51, Read When Entered First Grade; V101, Attended Classical Concerts; and V105, Went Boating. The above items suggested that highly intellectual persons tended to attrite more than other persons, and were not as regularly promoted. Interestingly, V102, Participated in Athletics, was related to the criterion in the expected direction; however, V105, Went Boating, was related to the criterion variables in the opposite direction as expected. Persons who frequently went boating during the period of time they were in high school tended to attrite from the Navy more so than other persons. This may have been due to unrealistic expectations as well as their becoming disenchanted with their experiences in the Navy. Additional subscales were not formed with the Personal Competence items. Those described above were included in later analyses without being combined with other items.

All the Vocational Maturity Scale items had effects on the criterion variables in the expected direction. Having prior skills useful to the Navy and positive expectations tended to be directly related to non-attrition and "normal" advancement.

For attrition, four Adaptability scale items had effects in a direction opposite to those anticipated. These items were: V45, Parents Encouraged Different Friends; V43, Among First Students to Learn Events; V32, Friends of Another Racial Group; and V122, Played Musical Instrument. Five of the Adaptability scale items had effects on military advancement opposite to those expected. These five items were: V121, Did Volunteer Work; V115, Made New Friends; V32, Friends Another Racial Group; and V122, Played Musical Instrument. These items seemed to be singling out those persons who put more emphasis on their social relationships than on their job performance. The item V32, the number of friends of another racial group, was probably a surrogate measure of the total number of friends a person had. The more friends of another racial group one had, in most instances, the higher the total number of friends.

The Authority Figures items tended to have relationships with the criterion variables in the direction expected. All the items which had significant effects on military advancement fit the expected pattern. Only two items did not: V40, Parents often Hassled Me; and V18, Put Out of Classes by Teachers. Neither one of these variables had a significant effect on military advancement.

Stage Three: Regression of Criterion Variables on Models Composed of Subscales from the Same Scale. In the previous stage we identified the items in each subscale which had significant effects on the criterion variables when other items in the subscales were controlled. We were able to reduce the number of items to be used in the final scales. Our next task was to determine whether the effects of various subscales would cancel each other out. We had particular interest in determining whether or not the effects of items which were in an opposite direction to those anticipated would be cancelled out once the items of the other subscales of the same scale were controlled.

We derived a subscale score by computing the unweighted mean of the items in the scale. It was found that there were some items which maximized the prediction of attrition but which did not maximize the prediction of military advancement, and vice versa. Thus, the subscales for predicting attrition were not necessarily the same as the subscales for predicting military advancement. To distinguish the subscales, the names of the attrition subscales included a "1" at the end of them, and the names of the military advancement subscales included a "2" at the end.

A stepwise multiple regression was carried out for each scale, using as independent variables all the significant subscales and items found in the previous stage for each respective scale (see Appendix D). As in Stage Two, in the stepwise regression procedure employed, items were added to the regression models one at a time until the number of items with statistically significant effects on the dependent variable was maximized, and the number of items with statistically insignificant effects on the dependent variable minimized.

A number of the subscales and items did not yield statistically significant results. Therefore, they were eliminated from the scales. One the other hand, a number of the items which had effects in an unanticipated direction were found to have statistically significant effects even after items in the other subscales were controlled. These items were maintained for analysis in the following stage.

Stage Four: Regression of Criterion Variables on Models Composed of Subscales from Different Scales. In this stage we were concerned with comparing the effects of different scales, and determining whether the effects of the subscales and items found to be statistically significant in the previous stage would be cancelled out when controlled for the effects of subscales and items of different scales. All the subscales and items found to have statistically significant effects in Stage Three were included in a single regression model for the dependent variable which they predicted. The criterion variables were then regressed on their respective model using stepwise multiple regression (see the aforementioned Appendix D).

Fourteen subscales and items were found to have statistically significant effects on attrition once those from other scales were controlled. Altogether they explained 8 percent of the variance of attrition, and had a multiple correlation coefficient of .3038.

Fifteen subscales and items were found to have statistically significant effects on military advancement once those from other scales were controlled. These variables explained 18 percent of the variance of military advancement and had a multiple correlation coefficient of .4310. (The significant items for attrition and military advancement are listed in Tables 5 and 6, respectively.)

At this time we had reduced the number of scale items to their minimum number. The LPQ scales were formed utilizing the subscales and items found to be statistically significant in Stage Four. The unweighted mean of the subscales and items in a scale was used as the scale's score. Where necessary, items were recoded so that their effects would be in an inverse direction with attrition and a positive direction with military advancement. Intercorrelations of the individual

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TABLE 5

Items Included in the LPQ1 Scales*

Family Relationships Scale
  V25   Ran away from home
  V42   Parents separated/divorced
  V113 Worked on projects with parents (-)

Early Maturity Scale
  V2   Planning courses during high school
  V3   Attended summer camp
  V7   Received my driver's permit
  V12   Budgeting my own money

Personal Competence Scale
  V46   Good reader
  V51   Read when entered first grade (-)
  V110 Read newspapers
  V120 Read nonfiction books (-)
  V125 Read science fiction

Adaptability
  V45   Parents encouraged different friends (-)
  V52   Parents friend other racial groups
  V61   Parents encouraged racial friends

Vocational Maturity
  V86   Thought Navy atmosphere would use skills
  V88   Felt Navy give me self-satisfaction
  V91   Definite career objectives
  V95   Navy learned skill help as civilian
  V98   Navy training necessary advanced school

Authority Figures
  V21   Expelled/suspended from high school
  V23   Disputes with school officials
  V35   Unsatisfactory relationship with boss
  V40   Parents often hassled me (-)
  V58   Trouble working under strict teachers
  V67   Difficult to relax with authority
  V68   Treated unfairly by school principal
  V77   Teachers treated me fairly

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*The minus sign in parentheses (-) indicates that the item has an effect on the dependent variable opposite to that expected.

TABLE 6

Items Included in the LPQ2 Scales*

Family Relationships Scale
- V25   Ran away from home
- V42   Parents separated/divorced
- V44   Stayed away from home
- V65   Parents wanted me to go to college, I didn't
- V66   Difficult communicating with parents
- V76   Stayed home only when nothing else to do
- V107 Got mad at parents .
- V108 Visited relatives (-)
- V113 Worked on projects with parents (-)

Early Maturity
- V2   Planning courses during high school
- V3   Attended summer camp
- V7   Received my driver's permit
- V12   Budgeting my own money
- V13   Own checking account
- V14   Bought my first car

Personal Competence
- V37   Time in library
- V46   Good reader
- V51   Read when entered first grade (-)
- V105 Went boating (-)
- V124 Read editorials
- V125 Read science fiction

Adaptability
- V121 Volunteer work
- V122 Play musical instrument

Vocational Maturity
- V28   Number of hours on school work
- V54   Best grades in math and/or science
- V89   Educational requirements of profession
- V91   Definite Navy career objectives
- V92   Promised advance after boot camp
- V93   Had skill in which Navy interested
- V97   Navy prepare for duty assignment
- V98   Navy training necessary advanced school

Authority Figures
- V17   Teachers positive influence
- V21   Expelled/suspended from high school
- V35   Unsatisfactory relationship with boss
- V58   Trouble working under strict teachers
- V60   Best not to trust police
- V62   Most policemen abused their authority
- V64   High school principals fail other job
- V67   Difficult to relax with authority
- V68   Treated unfairly by school principal
- V70   Police used unreasonable force
- V74   Police often hassled kids
- V77   Teachers treated me fairly
- V81   Most retail clerks not very nice
- V118 Drag raced

*The minus sign in parentheses (-) indicates that the item has an effect on the dependent variable opposite to that expected.

items for attrition and military advancement were also performed at this time (see Tables 7 and 8).

Stage Five: Regression of Criterion Variables on Models Composed of the LPQ Scales.   During this stage we were interested in determining the relative effects of the LPQ scales, and their combined effect when used altogether in a regression model.   The LPQ scales for the criterion variables were combined into a regression model and their respective criterion variables were regressed on the models.   The results for attrition were then compiled into two separate tables (see Tables 9 and 10).

Examining the standardized regression coefficients in Table 9, it was noted that with the exception of Authority Figures, the LPQ scales seemed to have a comparable effect on attrition, with their range in the size of the coefficients being -.0915 to -.1124.   On the other hand, the standardized regression coefficient for Authority Figures was -.1466.   The multiple correlation coefficient for the regression model was .2837.

In Table 10, examining the standardized regression coefficients for the LPQ scales predicting military advancement, it was noted that a somewhat similar pattern to that for attrition existed.   This time, with the exception of Authority Figures and Vocational Maturity, the LPQ scales seemed to have a comparable effect on military advancement, with their range in the size of the coefficients being .1080 to .1288.   On the other hand, the standardized regression coefficients for Authority Figures and Vocational Maturity were .1881 and .2174, respectively. The multiple correlation coefficient for the model was .4048.

These results indicated that the LPQ scales were useful in predicting attrition and military advancement.   Combining the scales, we were able to derive an overall LPQ score.   This was done for both the attrition LPQ scales and the military advancement LPQ scales.

Unweighted and weighted LPQ scores were computed.   The weights employed were based on the standardized regression coefficients of the scales.   Due to the small differences among these coefficients, the weighted LPQ scores were not much different from the unweighted LPQ scores.   For the LPQ scales predicting attrition, all scales were assigned a weight of "1" except for the Authority Figures scale which was assigned a weight of "2".   For the LPQ scales predicting military advancement, all the scales were assigned a weight of "1" except for the Authority Figures and Vocational Maturity scales which were assigned a weight of "2".

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Table 7

Intercorrelation of Items of LPQ1 Scale Items for the 1977 Navy Recruit Respondents

	FAM1	V25	V42
FAM1			
V25	.4993		
V42	.6365	.0710	
V113	-.5595	.0813	.0396

	EMAT1	V2	V3	V7
EMAT1				
V2	.4179			
V3	.3535	.1543		
V7	.8538	.0937	.0157	
V12	.3756	.1200	.1147	.0576

	COMP1	V46	V51	V110	V120
COMP1					
V46	.4909				
V51	-.3996	.1779			
V110	.5157	.1460	.1214		
V120	-.1431	.1644	.1963	.2354	
V125	.3326	.1162	.1420	.1768	.5270

	ADAPT1	V45	V52
ADAPT1			
V45	-.1524		
V52	.7590	.2215	
V61	.5205	.5624	.3061

	VMAT1	V86	V88	V91	V95
VMAT1					
V86	.6682				
V88	.6970	.3645			
V91	.6357	.2773	.2810		
V95	.2094	.1496	.0991	.1116	
V98	.5284	.1772	.1968	.1930	.6703

	AUTH1	V21	V23	V35	V40	V58	V67	V68
AUTH1								
V21	.2515							
V23	.2992	.3096						
V35	.3249	.0816	.1314					
V40	-.6666	.0731	.1072	.0420				
V58	.2867	.0927	.1216	.1156	.1181			
V67	.3204	.0370	.1311	.0727	.1163	.2367		
V68	.3063	.2101	.2664	.1084	.1079	.1822	.1444	
V77	.2810	.1416	.1367	.0941	.0345	.1374	.0574	.1656

Table 8

Intercorrelation of LPQ2 Scale Items for the 1977 Navy Recruit Respondents

	FAM2	V25	V42	V44	V65	V66	V76	V107	V108
FAM2									
V25	.0762								
V42	.3699	.0710							
V44	.1247	.1610	.0857						
V65	.0967	.0479	.0182	.1000					
V66	.0320	.2080	.0965	.3696	.1138				
V76	.1072	.0385	.0304	.2475	.1319	.2175			
V107	.2168	.1019	.0579	.2395	.1287	.2826	.1984		
V108	-.4800	.0591	-.0378	.1080	-.0610	.0708	.0613	-.1757	
V113	-.4231	.0813	.0396	.1570	-.0636	.1518	.0757	-.0670	.2681

	EMAT2	V2	V3	V7	V12	V13
EMAT2						
V2	.3397					
V3	.2943	.1543				
V7	.7142	.0937	.0157			
V12	.3175	.1200	.1147	.0576		
V13	.4037	-.0117	-.0008	.1250	-.0047	
V14	.6864	-.0114	-.0400	.3395	-.0158	.2072

	COMP2	V37	V46	V51	V105	V124
COMP2						
V37	.6279					
V46	.4861	.1475				
V51	-.1670	.0786	.1779			
V105	.0550	.0352	-.0493	.0681		
V124	.6251	.2643	.1454	.1760	.1173	
V125	.6249	.2566	.1162	.1420	.1101	.3530

	ADAPT2	V121	V122
ADAPT2			
V121	-.6808		
V122	-.6532	.1667	
V126	-.6678	.1963	.1407

	VMAT2	V28	V54	V89	V91	V92	V93	V97
VMAT2								
V28	.3691							
V54	.4060	.0799						
V89	.5701	.0578	.1056					
V91	.6021	.1187	.0986	.2611				
V92	.4666	.0494	.0631	.1629	.1537			
V93	.5203	.0404	.0847	.2806	.2116	.1829		
V97	.5489	.0292	.1177	.2054	.3083	.1313	.1456	
V98	.4336	.0598	.0262	.1432	.1930	.0676	.0766	.2086

	AUTH2	V17	V21	V35	V58	V60	V62	V64	V67
AUTH2									
V17	.2726								
V21	.3645	.0661							
V35	.1702	.0028	.0816						
V58	.4414	.0847	.0927	.1156					
V60	.6705	.0644	.1763	.1149	.2032				
V62	.7117	.0802	.1522	.0821	.1777	.4400			
V64	.4918	.0721	.0925	.0937	.2084	.2130	.2479		
V67	.2537	.0639	.0370	.0727	.2367	.1916	.1687	.1446	
V68	.5110	.0057	.2101	.1084	.1822	.2403	.2347	.2671	.1444
V70	.6735	.0297	.1543	.1165	.1986	.3798	.5167	.2499	.1421
V74	.6848	.0974	.1559	.1051	.1361	.3929	.4507	.2465	.1618
V77	.3697	.1447	.1416	.0941	.1374	.1450	.1118	.1185	.0574
V81	.2697	.0338	.0164	.1094	.1343	.1908	.2177	.2094	.1515
V118	.2523	.0271	.1004	.0917	.1447	.1126	.1872	.1439	.1181

(AUTH2 cont'd.)

	V68	V70	V74	V77	V81
V70	.2415				
V74	.3065	.3750			
V77	.1656	.1056	.1216		
V81	.1303	.1906	.2022	.0130	
V118	.1620	.1741	.2148	.0602	.1081

TABLE 9

Multiple Regression of Attrition on the LPQ1 Scales for the 1977 Navy Recruit Respondents

LPQ1 Scales	Regression Coefficients	
	Unstandardized	Standardized
FAM1	-.0076*	-.1124*
EMAT1	-.0053*	-.0915*
COMP1	-.0088*	-.0919*
ADAPT1	-.0076*	-.0994*
VMAT1	-.0062*	-.1007*
AUTH1	-.0128*	-.1466*

Constant Term	4.9956
Multiple R	.2837
Multiple R^2	.0805
Adjusted Multiple R^2	.0764
Number of Cases	1354

TABLE 10

Multiple Regression of Index of Military Advancement on the LPQ2 Scales for the 1977 Navy Recruit Respondents

LPQ2 Scales	Regression Coefficients	
	Unstandardized	Standardized
FAM2	.0307*	.1288*
EMAT2	.0227*	.1080*
COMP2	.0544*	.1237*
ADAPT2	.0184*	.1110*
VMAT2	.0507*	.2174*
AUTH2	.0314*	.1881*

Constant Term	-18.4826
Multiple R	.4048
Multiple R^2	.1638
Adjusted Multiple R^2	.1580
Number of Cases	1249

*Statistically significant at the .05 level of significance.

The formulas used in computing the scores are presented in the aforementioned Appendix C. Intercorrelations of the scales, the LPQ scores, and their respective criterion variables are presented in Tables 11 and 12.

Very little difference between the unweighted and the weighted LPQ scores were revealed. They were highly correlated with each other, yielding .0600 for LPQ1 weighted and LPQ1 unweighted, where the LPQ scores predicted attrition; and yielding .0487 for LPQ2 weighted and LPQ2 unweighted, where the LPQ scores predicted military advancement. The weighted LPQ scores were used in subsequent analyses due to their slightly higher correlation with the criterion variables.

Stage Six: Regression of Criterion Variables on Models Composed of LPQ Score and Traditional Predictors of Military Success. The previous stage provided us with a single LPQ score for the prediction of attrition, and a single LPQ score for the prediction of military advancement. Other factors had been used by the Navy to predict military success. At this point we were faced with the following questions: How would the LPQ compare to such factors in terms of its predictive utility? Could predictions be improved by using the LPQ in addition to the traditional predictors? If so, how much?

The Success Chances for Recruits Entering the Navy (SCREEN) Score was developed to aid recruiters in estimating the chances for an individual applicant to effectively complete his/her first year of active military service. This score was based on the following factors: education, AFQT, age, dependency status, and race. It was regularly used in assessing the applicant for enlistment.

In comparing the LPQ with the SCREEN Score we found that they were somewhat correlated with each other. LPQ1 and the SCREEN Score had a correlation of .2825 (see Table 11), and LPQ2 and the SCREEN Score had a correlation of .3987 (see Table 12). The SCREEN Score had a correlation of -.1828 with attrition, and a correlation of .3661 with military advancement. The corresponding correlations for the LPQ Scores were -.2811 for the correlation of attrition and LPQ1, and .3945 for the correlation of military advancement with LPQ2. Seemingly, the LPQ Scales were better predictors than the SCREEN Score. However, before such a conclusion could be made we had to examine the relationship the predictors had with the criterion variables when their mutual effects were controlled. Regression analysis was employed for this task (see Tables 13 and 14).

These analyses revealed that the LPQ scores and the SCREEN Score had statistically significant effects on the criterion variables even when their mutual effects were controlled. In each case the effect of the LPQ score was greater

Table 11

Intercorrelations of LPQ1 Scales, Attrition, SCREEN Scores, and Education for the 1977 Navy Recruit Respondents

	LPQ1-uw	LPQ1-w	FAM1	EMAT1	COMP1	ADAPT1	VMAT2	AUTH1	Attrition	Screen Score	Education
LPQ1-uw											
LPQ1-w	.9699										
FAM1	.4196	.3870									
EMAT1	.4692	.3921	.0173								
COMP1	.3323	.3007	.0382	-.0461							
ADAPT1	.3637	.3209	-.0905	-.0093	-.0045						
VMAT1	.5400	.4932	-.0281	.0591	.0659	.0777					
AUTH1	.4329	.6393	-.0976	-.0311	.0622	.0447	.1219				
Attrition	-.2734	-.2811	-.1132	-.0836	-.1132	-.0916	-.1437	-.1671			
Screen Score	-.2699	-.2825	.1701	.1501	.0850	-.0167	.0998	.1854	-.1328		
Education	-.0712	-.0783	.0524	-.0004	.0581	-.0402	.0433	.0514	-.0741	.3563	
Mean	100.1	100.1	100	100	100	100	100	100	.1572	83.4	11.4
Standard Dev.	21.8	21.8	3.34	6.19	3.76	4.77	5.90	4.16	.3641	7.19	2.45
Number Cases	1420	1420	1529	1471	1538	1542	1543	1495	1482	1310	1552

Table 12

Intercorrelations of LPQ2 Scales, Index of Military Advancement, SCREEN Score, and Education for the 1977 Navy Recruit Respondents

	LPQ2-uw	LPQ2-w	FAM2	EMAT2	COMP2	ADAPT2	VMAT2	AUTH2	Mil. Advance.	Screen Score	Education
LPQ2-uw											
LPQ2-w	.9487										
FAM2	.5297	.3899									
EMAT2	.4996	.3663	.0239								
COMP2	.2017	.2304	-.0487	-.0193							
ADAPT2	.4548	.2608	.2652	-.0035	-.1954						
VMAT2	.3194	.5047	.0055	.1491	.1791	-.2673					
AUTH2	.5873	.7249	-.0781	.0579	.1434	.0428	.0898				
Mil. Advance.	.3736	.3945	-.1234	-.1487	.1591	.0413	.2486	.2542			
Screen Score	.3202	.3987	.1181	.1596	-.1935	-.0038	.1900	.2838	.3666		
Education	.1162	.1414	.0435	-.0406	-.0764	-.0496	-.0869	.1113	.1763	.3563	
Mean	99.5	99.6	99.9	99.1	97.5	100	100	100	2.88	83.4	11.4
Standard Dev.	21.6	23.2	8.94	5.19	2.53	6.68	4.85	5.41	1.09	7.19	2.45
Number Cases	1374	1374	1506	1464	1535	1540	1531	1480	1405	1310	1552

TABLE 13

Multiple Regression of Attrition on LPQ1 and SCREEN Score
for the 1977 Navy Recruit Respondents

| | Regression Coefficients | |
	Unstandardized	Standardized
LPQ1	-.0448*	-.2640*
Screen Score	-.0052*	-.1012*
Constant Term	5.0873	
Multiple R	.3080	
Multiple R^2	.0948	
Adjusted Multiple R^2	.0932	
Number of Cases	1145	

TABLE 14

Multiple Regression of the Index of Military Advancement
on LPQ2 and the SCREEN Score for the 1977
Navy Recruit Respondents

| | Regression Coefficients | |
	Unstandardized	Standardized
LPQ2	.1406*	.2986*
Screen Score	-.0370*	.2454*
Constant term	-14.2252	
Multiple R	.4548	
Multiple R^2	.2069	
Adjusted Multiple R^2	.2054	
Number of Cases	1145	

*Statistically significant at the .05 level of significance.

than that of the SCREEN Score, and this was especially the case in the prediction of attrition, for which the standardized regression coefficient of the LPQ score (-.2640) was more than twice the coefficient of the SCREEN Score (-.1012).

We continued the analysis by including the LPQ score, and components of the SCREEN Score in the same regression model. The SCREEN Score components used were race (white = 1, nonwhite = 0), education (number of years of school completed), AFQT, Marital Status (married = 1, not married = 0), and number of children. The criterion variables were regressed on the models containing these variables. Four regression models were used:

- Model 1 included the LPQ Score and race.
- Model 2 included the LPQ Score, race and education.
- Model 3 included the LPQ Score, race, education and AFQT.
- Model 4 included the LPQ Score, race, education, AFQT, marital status and number of children.

From these models, standardized regression coefficients were compiled using attrition as a dependent variable and using military advancement as a dependent variable (see Tables 15 and 16, respectively). In every case, the coefficient for the LPQ score was statistically significant, and it was the highest one in the model. LPQ1, education, and AFQT were significant predictors of attrition; race, marital status, and number of children were not significant predictors. LPQ2, race, education, and AFQT were significant predictors of military advancement.

Overview

We learned that the LPQ was a better predictor of attrition and military advancement than the SCREEN Score, AFQT, education, dependency, and other traditional predictors (see Tables 17, 18, and 19). As shown in Table 17, we were able to ascertain the proportion of attritees and non-attritees of the recruits at various levels of LPQ. Over 36 percent of the recruits with a LPQ less than 975 attrited; however, less than 5 percent of the recruits with a LPQ score greater than 1014 attrited. (The details of Table 17 are presented graphically in Appendix E.) In order to give one a rough idea of the usefulness of the LPQ as a screening device, relevant cumulative percentage distributions were compiled (see Table 18). It was noted that about 10 percent of the non-attritees had a LPQ score less than 975; on the other hand, more than 33 percent of the attritees had a LPQ score less than 975.

TABLE 15

Regression Coefficients in Standard Form for the Multiple Regression
of the Attrition on Models Consisting of LPQ1, Race, Sex,
Education, Marital Status, and Number of Children
for the 1977 Navy Recruit Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ1	-.2670*	-.2628*	-.2458*	-.2464*
Race	-.0165	-.0155	-.0328	-.0312
Education		-.0552*	-.0520*	-.0504*
AFQT			-.0992*	-.0985*
Marital Status				.0122
Number Children				-.0372
Multiple R	.2677	.2733	.2882	.2895
Multiple R^2	.0717	.0747	.0831	.0838
Adjusted Multiple R^2	.0702	.0725	.0800	.0792
Number of Cases	1271	1271	1200	1200

TABLE 16

Regression Coefficients in Standard Form for the Multiple Regression
of the Index of Military Advancement on Models Consisting of
LPQ2, Race, Sex, Education, Marital Status, and Number of
Children for the 1977 Navy Recruit Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ2	.3969*	.3743*	.2886*	.2862*
Race	.0153	.0077	.0672*	.0674*
Education		.1403*	.1146*	.1121*
AFQT			.2761*	.2753*
Marital Status				.0334
Number Children				.0107
Multiple R	.3958	.4193	.4830	.4849
Multiple R^2	.1567	.1758	.2333	.2351
Adjusted Multiple R^2	.1552	.1737	.2306	.2312
Number of Cases	1172	1172	1164	1164

*Statistically significant at the .05 level of significance.

Table 17

Attrition by LPQ1 Score for 1977 Navy Recruits

LPQ1 Score (Mean=1000)	% Still in Navy as of July, 1978	% Separated Due to Failure to Adapt	Total	Number of Cases
954 or less	63.6	36.4	100.0	33
955 to 974	61.6	38.4	100.0	125
975 to 994	76.4	23.6	100.0	140
995 to 1014	87.3	12.7	100.0	503
1015 to 1034	95.3	4.7	100.0	317
1035 or more	95.2	4.8	100.0	63

Table 18

Cumulative Frequency of Recruits Who Did Not Attrite and Those Who Did Attrite by LPQ1 Score for the 1977 Navy Recruits

LPQ1 Score	Cumulative % Skill in Navy as of July, 1978	Cumulative % Separated Due to Failure to Adapt
954 or less	2.1	6.9
955 to 974	9.8	34.3
975 to 994	20.4	53.1
995 to 1014	64.0	89.7
1015 to 1034	94.0	98.3
1035 or more	100.0	100.0
Number of Cases	1006	175

Table 19

Mean Index of Military Advancement by LPQ2 Score for the 1977 Navy Recruits

LPQ2 Score (Mean=1000)	Mean Index of Military Advancement	Number of Cases
954 or less	2.2	51
955 to 974	2.4	175
975 to 994	2.6	328
995 to 1014	3.0	417
1015 to 1034	3.5	237
1035 or more	4.0	41

Our study of the 1977 recruits demonstrated that the LPQ is a good predictor of how well a recruit would perform in recruit training, whether the recruit would attrite during the 18-month period after recruit training, and military advancement as measured by the combination of attrition and pay grade. Our limitation in using only the data on the master personnel tapes for the longitudinal study did not permit detailed analyses of the predictive utility of the LPQ with regard to how well recruits performed their tasks after leaving recruit training. For this reason a cross-sectional survey of on-job performance of enlistees was conducted.

The Sample

Sampling Procedures

Three Naval air stations were assigned to the survey as sample sites: NAS, Kingsville, TX; NAS, Corpus Christi, TX; and NAS, Meridian, MS. Our target population included all enlistees who were in their first term of enlistment and had been in the Navy for at least two years. The sample consisted of 759 enlistees, 322 stationed at Kingsville, TX; 269 stationed at Corpus Christi, TX; and 168 stationed at Meridian, MS. Included in this sample were about 50 persons who were in their second term of enlistment but had been in the Navy for less than 6 years.

Approximately 90 percent of the target population participated in the survey. We asked those who did not want to participate to write their reasons on the back of one of the questionnaire forms. Thirty-two complied with our request. The most popular reason for refusal to participate was unwillingness to divulge personal information. Thirteen respondents felt this way. Six respondents indicated that they did not have the time to complete the questionnaire. Another five respondents said that they saw no personal benefit in their participation in the study. Two persons indicated they did not believe in surveys, and two others felt they needed more information about the study before agreeing to participate. As for the other four respondents, one simply stated he was not interested; two seemed to be concerned as to how the results of the study would be used; and one refused because he did not "feel led by God to fill this out."

Characteristics of the Sample

As presented in Appendix F, the following data were collected. The sample consisted of 637 men and 122 women. Eighty percent (607 enlistees) were white,

seven percent (54 enlistees) were black, five percent (38 enlistees) were Mexican
American, and eight percent (60 persons) were members of other racial groups.
About forty-five percent of the enlistees were married, and over 80 percent did
not have children. The mean age of the recruits at the time of the survey was
21.9 years. They had been in the Navy for 32 months, and had a mean grade of
3.5. The enlistees had completed an average of 12.1 years of school. Since they
were all stationed at Naval air stations, it was not unusual that their ratings
were concentrated in the aviation classifications.

Data Collection Procedures

Administration of the LPQ

The LPQ was administered in groups as small as eight enlistees and as large
as 80 enlistees. The purpose of the survey was explained, and those who agreed
to participate read and signed a privacy statement giving us permission to obtain
information from their personnel jackets and evaluations of their performance from
their supervisors. The enlistees completed the LPQ in 20 to 45 minutes.

Administration of the Supervisor's Rating Form

The supervisor of each enlistee participating in the survey was requested to
evaluate the enlistee using the Supervisor's Rating Form. A coordinator for each
unit of the air stations took the responsibility of distributing and collecting
the rating forms. A member of the research team collected the rating forms from
the coordinators.

Collection of Data from the Personnel Jackets

The research team reviewed the personnel jacket of each enlistee participating
in the survey. Using a form created for this purpose, we collected data on the
awards, commendations, and promotions obtained by the enlistees; any problems they
may have had with the Navy's criminal justice system and the dispositions taken;
the routine Navy evaluations they received from their supervisors as part of the
regular evaluation procedures of the Navy; and their scores on various diagnostic
tests.

Data Analysis Design

The data analysis design used in analyzing the cross-sectional data was com-
parable to that used in analyzing the longitudinal data. First, we developed
criterion measures of military success. Second, through a series of correlation
and regression analyses, we identified the LPQ items most significant in the pre-
diction of the criterion measures. Third, we analyzed the relative prediction
utility of the LPQ when compared to traditional predictors of military success.

The Criterion Measures

Three sets of criterion measures were identified for use in this study:
(1) supervisor's evaluations; (2) measures of involvement with the criminal
justice system; and (3) awards, promotions, and demotions. As part of the reg-
ular evaluation procedures of the Navy, enlistees were evaluated in terms of
their professional performance, military behavior, leadership, military appear-
ance, and adaptability. These evaluations for the enlistees were combined with
the Supervisor's Rating Form evaluations to form individual indices of each
aspect of military life being evaluated and an Index of Overall Evaluation. As
part of this form the supervisors compared the enlistees to other enlistees of
the same rating. Answers to this item were used in a second overall evaluation
index, referred to as the Rating Index. Moreover, the supervisors were asked
to evaluate the reenlistment potential of the enlistees. Their answers were
compiled as the Index of Reenlistment Potential. The Index of Overall Evalua-
tion, the Rating Index, and the Index of Reenlistment Potential were the prin-
cipal criterion measures for this study.

The second set of criterion measures included the following measures of
involvement with the Naval criminal justice system: number of offenses, number
of days ever punished, and number of dollars ever punished. The number of awards,
promotions, and demotions constituted the third set of criterion measures.

The Correlation and Regression Analyses

As for the analysis of the longitudinal data, we principally employed cor-
relation and regression analyses in analyzing the data collected. We proceeded
systematically through the six stages of analysis employed earlier. As in the
longitudinal study, we hoped to maximize the predictive utility of the LPQ items.

Findings

The Criterion Measures

We obtained the first and most recent supervisor's evaluation from the En-
listee's Evaluation Forms found in the personnel jackets of each participant (see
Table 20). The variability of the most recent evaluation was greater than that
for the first evaluation. There tended to be slightly more persons at the higher
levels. Most of the respondents had not been evaluated for leadership. They had
not been in the Navy long enough to provide a basis for such an evaluation. The
leadership evaluations were not used in the study due to the number of cases with
missing data.

TABLE 20

First and Most Recent Performance Evaluation of the
Air Station Respondents Since Beginning
First Duty Assignment

(Percentage Distribution)

Evaluation (4.0 = highest)	Professional Performance		Military Behavior		Leadership		Military Appearance		Adaptability	
	First	Most Recent	First	Most Recent	First	Most Recent	First	Most Recent	First	Most Recent
0 to 2.6	0.3	0.4	1.2	1.6	0.0	1.0	0.3	0.2	0.0	0.6
2.7 to 2.8	2.0	2.2	2.3	2.7	0.0	0.5	0.5	2.1	0.5	1.4
2.9 to 3.0	2.9	2.3	3.1	2.1	9.8	2.1	3.1	4.1	1.5	2.6
3.1 to 3.2	11.0	5.3	6.2	6.2	9.8	4.7	6.9	8.0	7.1	2.8
3.3 to 3.4	19.1	13.9	39.1	15.7	19.5	15.0	42.1	16.7	38.6	10.0
3.5 to 3.6	32.8	27.0	30.4	31.8	36.5	36.3	27.9	29.5	29.5	27.7
3.7 to 3.8	25.2	34.4	15.2	32.3	19.5	31.1	16.5	29.9	19.9	41.9
3.9 to 4.0	6.7	14.5	2.5	7.6	4.9	9.3	2.8	9.5	2.9	13.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	345	511	612	517	41	193	613	515	607	501
Mean	3.6	3.7	3.5	3.6	3.5	3.6	3.5	3.6	3.5	3.7

Items from the Supervisor's Rating Form were added to the evaluations found in the personnel jackets, as shown in Table 21.

An Index of Professional Performance was created by computing the unweighted means of the most recent evaluation for professional performance in the personnel jackets and the following survey items:

- Demonstrates good problem solving skills
- Needs prodding to perform
- Completes assignments on time
- Does more than is required.

An Index of Military Behavior was created by computing the unweighted means of the most recent evaluation for military behavior in the personnel jackets and the following survey items:

- Resists authority
- Has been given nonjudicial punishment.

An Index of Military Appearance was created by computing the unweighted mean of the most recent evaluation for military appearance in the personnel jackets and the following survey items:

- Fails to meet standards of dress and appearance
- Is poised and self-assured.

An Index of Adaptability was created by computing the unweighted mean of the most recent evaluation for adaptability in the personnel jackets and the following survey items:

- Works well with others
- Receives respect from co-workers.

The unweighted mean of the above indices was used as an Index of Overall Evaluation. (Distribution of the respondents according to these indicies are presented in Table 22. Formulas used in creating the indices are presented in the aforementioned Appendix C.)

A matrix of intercorrelations of the indices was developed for further analysis (see Table 23). Examining the distributions of the criterion variables, it was noted that the indices based on supervisors' evaluations had more variability than the other criterion variables. For the offense measures the respondents were concentrated at the lower end of the scales since most respondents (78 percent) had not committed an offense. There was practically no variability among the respondents in the number of demotions; 95 percent were never demoted. The small number of respondents who had been demoted (29 percent) limited the use of this

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TABLE 21

Evaluation of Air Station Respondents by Their Supervisors Using Survey Evaluation Forms

(Percentage Distribution)

	Never	Rarely	Some-times	Often	Always	Total	N
Demonstrates good problem solving skills	0.4	4.8	25.6	48.1	21.1	100.0	544
Resists authority	46.5	31.4	16.7	4.9	0.5	100.0	566
Completes assignments on time	0.0	1.2	15.5	45.1	38.2	100.0	567
Needs prodding to perform	38.4	33.7	20.7	6.3	0.9	100.0	567
Works well with others	0.2	1.1	11.6	26.6	60.5	100.0	567
Fails to meet standards of dress and appearance	35.7	38.1	18.6	6.3	.3	100.0	569
Does more than is required	3.0	13.6	31.9	42.0	9.5	100.0	567
Has been given non-judicial punishment	81.9	10.8	5.3	2.0	0.0	100.0	492
Is poised and self-assured	0.4	4.8	21.7	44.9	28.2	100.0	568
Receives respect from co-workers	0.5	3.7	20.0	35.4	40.4	100.0	569

TABLE 22

Indices of Performance Evaluation by Supervisors
for Air Station Respondents

(Percentage Distribution)

	Index of Professional Performance	Index of Military Behavior	Index of Military Appearance	Index of Adaptability	Overall Index
Less than 300	4.9	2.6	2.6	1.5	1.1
300 to 349	12.7	4.6	6.8	7.0	5.2
350 to 399	24.4	6.2	22.4	15.6	17.4
400 to 449	30.6	26.5	31.0	27.8	34.9
450 to 500	27.4	67.1	37.2	71.1	39.4
Total	100.0	100.0	100.0	100.0	100.0
Number of cases	409	393	429	419	363

TABLE 23

Intercorrelation of the Indices of Military Performance
for the Air Station Respondents

		1	2	3	4	5	6	7
1.	Prof. Performance							
2.	Military Behavior	.6161						
3.	Mil. Appearance	.7021	.6369					
4.	Adaptability	.7306	.5798	.6312				
5.	Overall Eval.	.9005	.8217	.8638	.8550			
6.	Rating Index	.8338	.5555	.6549	.7072	.8239		
7.	Reenl. Potential	.7633	.7002	.7296	.6843	.8447	.8050	
8.	No. of Promotions	.0876	.0699	.0904	.0634	.0916	.1083	.1029
9.	No. of Demotions	-.1201	-.2736	-.1350	-.0891	-.1898	-.0921	-.1031
10.	No. Commendations	.1143	.0406	.1805	.0842	.1152	.1080	.1087
11.	No. of Offenses	-.2536	-.4415	-.2373	-.0901	-.3096	-.2266	-.2879
12.	Days Punished	-.0313	-.3506	-.0447	-.0254	-.1772	-.0507	-.0992
13.	Dollars Punished	-.1329	-.3810	-.1609	-.0988	-.2414	-.1356	-.1580
	Mean	406	449	422	443	430	3.79	3.78
	Stand. Deviation	59.4	52.8	52.8	52.6	47.4	.8995	1.09
	No. of Cases	409	393	429	419	363	572	572

		8	9	10	11	12	13
1.	Prof. Performance						
2.	Military Behavior						
3.	Mil. Appearance						
4.	Adaptability						
5.	Overall Eval.						
6.	Rating Index						
7.	Reenl. Potential						
8.	No. of Promotions						
9.	No. of Demotions	.1392					
10.	No. Commendations	.1913	.0321				
11.	No. of Offenses	.0503	.2154	-.0320			
12.	Days Punished	.1086	.2922	.0615	.3382		
13.	Dollars Punished	.1421	.3834	-.0120	.4307	.4598	
	Mean	2.16	.0539	.4063	.5135	15.6	48.7
	Stand. Deviation	.9717	.2648	.7813	1.63	65.7	173
	No. of Cases	631	631	630	631	630	630

variable as a criterion variable (see Appendix G for distributions). Our best measures of performance were the three general indices: the Index of Overall Evaluation, the Rating Index, and the Index of Reenlistment Potential. These indices were the principal criterion variables which were used in the development of LPQ scales for the prediction of performance.

Correlation and Regression Analyses

In order to maximize the predictive utility of the LPQ of attrition and military advancement, it was necessary to use items in the LPQ scales for the prediction of attrition which were different from items in the LPQ scales for the prediction of military advancement, and vice versa. Two separate sets of scales were developed. Our purpose was to maximize the prediction of military success among the enlistees. In this effort we concentrated on the three general indices derived from the supervisors' evaluations. Using these variables as dependent variables, we proceeded through six stages performing correlation and regression analyses comparable to those done in the analyses of the longitudinal data.

Stage One: Correlation of the LPQ Items With the Criterion Measures. The LPQ items were correlated with the supervisors' evaluations (see Appendix H). Fifty-three LPQ items had a statistically significant correlation with the criterion measures. Focusing on the general measures, seventeen LPQ items had a statistically significant correlation with at least two of the three general measures of supervisors' evaluations.

We also correlated the LPQ items with the number of promotions, demotions, and commendations; and measures of involvement with the criminal justice system (see Appendix 1). Fourteen items had a statistically significant relationship with the number of demotions. Fifteen items had a statistically significant relationship with the number of commendations. Forty-two items had a statistically significant relationship with the variables measuring involvement with the criminal justice system. Eighteen of these items had a statistically significant relationship with at least two of the three variables measuring involvement with the criminal justice system.

We proceeded to identify the LPQ items which had statistically significant effects on the criterion variables when other items were controlled. Stepwise multiple regression analysis was used. The three general measures of the supervisors' evaluations were used as dependent variables.

Stage Two: Regression of Criterion Variables on Models Composed of Subscale Items. One to four items within the subscales had significant effects on the dependent variables. The items which were significant for one dependent variable tended to be significant for the others. About fourteen items had an effect in the direction opposite to that expected. Two of these, items 15 and 75, were combined to form a Family Projects subscale as was done in the earlier analyses of attrition (for detailed listing of subscale items, see Appendix J).

Stage Three: Regression of Criterion Variables on Models Composed of Sub-Scales from the Same Scale. At this stage the significant items in Stage Two were combined to obtain the total subscale score. Then for each scale, all the subscales were combined into a single regression model, and the dependent variables were regressed on the resulting models. Items which had effects opposite to those expected were not combined with the other items of a subscale in computing the total subscale score, but they were included in the regression models as uncombined items (see Appendix K). The results provided a basis for a further reduction in the number of items to be included in the LPQ scales. Some of the subscales and items did not yield statistically significant results. These were eliminated from further analyses.

Stage Four: Regression of Criterion Variables on Models Composed of Sub-scales from Different Scales. At this stage, items and subscales of different scales were considered together in the same regression model. Again, stepwise multiple regression was used (see Appendix L for results). Items and subscales from each of the six LPQ scales had a significant effect on the dependent variables. The multiple R when the Index of the Overall Evaluation was used as a dependent variable was .4620; the multiple R when the Rating Index was used as a dependent variable was .4360; and the multiple R when the Index of Reenlistment Potential was used was .4423.

The subscales Family Projects, Early Driving, and Sociability, and the item Read Science Fiction had effects on the dependent variables opposite to those expected. The persons who joined their parents in doing things tended to have performance problems similar to those persons who often "got mad at parents." Persons who began driving at an early age tended to have performance problems, and similarly, persons who were highly sociable tended to have performance problems. These patterns were not anticipated.

Stage Five: Regression of Criterion Variables on Models Composed of the LPQ Scales. On the basis of the results of the Stage Four regressions, the LPQ scales for the prediction of performance in the Navy were developed. The items and subscales with statistically significant effects on at least two of the three dependent variables were combined in forming the LPQ scales for performance. Those items with effects in the direction opposite to those expected were recoded so that their relationship with the dependent variables would yield a positive correlation.

The basic formula used in developing the scales is presented in the aforementioned Appendix C. A listing of the items included in the scales as well as the matrices of the intercorrelation of the items and total scale scores are presented in Tables 24 and 25, respectively).

The detailed indices of military performance derived from the supervisors' evaluations and the three general measures of performance were regressed on models comprised of the LPQ scales (see Appendix M for results). The multiple correlation coefficient for the detailed military performance measures ranged from .3331 to .3914, and the multiple correlation coefficient for the three general measures ranged from .3856 to .4082. The LPQ scales predicted military performance at a statistically significant level.

Combining the LPQ scales, the arithmetic mean of all the scales was used as the total LPQ score. Both weighted and unweighted scores were computed. The weights used were based on the results from the Stage Five regressions. The Authority Figures scale and the Adaptability scales were assigned a weight of "3"; the Early Maturity scale and the Personal Competence scale were assigned a weight of "2"; and the Family Relationship scale and the Vocational Maturity scale were assigned a weight of "1", using the formulas presented in Appendix C. The weighted LPQ score was used in subsequent analyses due to its higher correlation with the performance measures.

The intercorrelation of the scales, the total scale score, and the means and standard deviations of the above variables are presented in Table 26. The results of the correlation of the scales and measures of military performance are presented in Table 27.

Stage Six: Regression of Criterion Variables on Models Composed of the LPQ Score and Traditional Predictors of Military Success. As in the analyses of attrition and military advancement, regression analyses were carried out to determine whether the LPQ was a better predictor of military performance than such

Table 24

Items Included in the LPQ3 Scales

Family Relationships Scale
V 15 Doing something with parents (-)
V 20 Evenings with my family
V 42 Parents separated/divorced
V 44 Stayed away from home
V 75 Parents included me in discussions (-)
V107 Got mad at parents

Early Maturity
V 7 Received my driver's permit (-)
V 14 Bought my first car (-)

Adaptability
V 32 Friends of another racial group (-)
V 48 More comfortable working alone (-)
V 57 Little contact, other racial groups
V 61 Parents encouraged racial friends
V 96 No trouble fitting into crew (-)
V115 Made new friends

Personal Competence
V111 Went to see plays
V125 Read science fiction

Vocational Maturity
V 54 Best grades in math and/or science
V 90 Prior training in Navy area pursued

Authority Figures
V 18 Put out of classes by teachers
V 23 Disputes with school officials
V 50 Resisted being bossed
V 67 Difficult to relax with authority
V 77 Teachers treated me fairly
V 79 Felt excluded from school activities
V 81 Most retail clerks not very nice
V 83 School officials forced accept change
V118 Drag raced

Table 25

Intercorrelation of Items of LPQ3 Scale Items for the Air Station Respondents

	FAM3	V15	V20	V42	V44	V75
FAM3						
V15	-.4916					
V20	-.4161	.3197				
V42	-.0845	.0932	.0712			
V44	-.1912	.2309	.3990	.0613		
V75	-.4142	.1259	.0645	.0955	.1752	
V107	.4765	.1226	.2146	.0574	.2799	.1349

	EMAT3	V7
EMAT3		
V7	-.8623	
V14	-.8641	.4903

	ADAPT3	V32	V48	V57	V61	V96
ADAPT3						
V32	-.0191					
V48	-.2632	.0429				
V57	.4241	.2445	.0676			
V61	.7943	.1357	-.0653	.1399		
V96	-.2249	-.0264	.0099	-.0241	.0153	
V115	.4321	.1155	.0460	.0814	.1202	.0378

	COMP3	V111
COMP3		
V111	.6493	
V125	-.6475	.1593

	VMAT3	V54
VMAT3		
V54	.7165	
V90	.7164	.0267

	AUTH3	V18	V23	V50	V67	V77	V79	V81	V83
AUTH3									
V18	.5528								
V23	.5469	.5816							
V50	.3973	.0974	.0802						
V67	.4770	.0788	.0777	.1078					
V77	.4570	.2413	.2343	.0924	.0807				
V79	.4121	.0666	.1172	.0383	.1324	.1328			
V81	.4070	.0602	.0262	.0005	.1005	.0366	.0963		
V83	.4520	.1262	.1188	.1126	.1674	.0448	.1374	.1849	
V118	.4208	.1943	.1741	.0117	.0210	.0920	.0230	.0692	.0421

Table 26

Intercorrelation of the LPQ3 Scales

	LPQ3-uw	LPQ3-w	FAM3	EMAT3	COMP3	ADAPT3	VMAT3	AUTH3
LPQ3-uw								
LPQ3-w	.9083							
FAM3	.1716	.0245						
EMAT3	.5957	.6122	-.1165					
COMP3	.4250	.4225	-.0123	.0375				
ADAPT3	.3605	.5003	-.0506	.0720	.0000			
VMAT3	.4647	.2291	-.0177	.0066	-.0358	.0415		
AUTH3	.3596	.5052	-.0067	.0884	.0152	.0609	-.0138	
Mean	99.9	100	99.6	100	100	100	100	100
Stand. Dev.	2.55	2.64	4.29	8.61	6.48	4.64	7.17	4.53
No. of Cases	715	715	739	751	747	730	746	729

Table 27

Correlation of the LPQ3 Scales with
Indices of Military Performance

		LPQ3-uw	LPQ3-w	FAM3	EMAT3	COMP3	ADAPT3	VMAT3	AUTH3	Screen Score	Education
1.	Prof. Performance	.2872	.3055	.0647	.1005	.0742	.2344	.1227	.1668	.0013	.1209
2.	Military Behavior	.2642	.2914	.0434	.1336	.0688	.1714	.0593	.2039	-.0212	.1423
3.	Mil. Appearance	.2594	.3103	.0009	.1375	.1508	.1990	.0185	.2091	.0669	.1243
4.	Adaptability	.2733	.2752	.0750	.1458	.0905	.1652	.1035	.1311	-.0604	.0506
5.	Overall Eval.	.3735	.3975	.0642	.1664	.1179	.2664	.1311	.2301	-.0256	.1217
6.	Rating Index	.2373	.2568	.0132	.1063	.0892	.1416	.0817	.1717	-.0073	.1397
7.	Reenl. Potential	.2397	.2668	.0107	.0933	.1213	.1333	.0600	.1998	.0465	.1400
8.	No. of Promotions	-.0707	-.0465	-.1077	-.0321	-.0368	-.0507	-.0363	.0429	.0580	-.0773
9.	No. of Demotions	-.0736	-.0676	-.0567	-.0424	.0386	-.0386	-.0447	-.0399	-.0310	-.0766
10.	No. Commendations	.0684	.0751	-.0088	.0544	-.0422	-.0125	.0486	.1288	.0709	.0427
11.	No. of Offenses	-.1714	-.1761	-.0485	-.0483	-.0137	-.1328	-.0885	-.1217	-.0583	-.1224
12.	Days Punished	-.1059	-.1213	-.0233	-.0551	-.0858	-.0507	.0195	-.0774	.0154	-.0500
13.	Dollars Punished	-.1771	-.1697	-.0164	-.0662	-.0450	-.1076	-.1149	-.0798	.0018	-.0791
14.	Screen Score	.1060	.1160	.0160	.0168	.0236	.0312	.0263	.1139	1.0000	.4624
15.	Education	.1805	.2048	-.0563	.1365	.1098	.0871	.0144	.0999	.4624	1.0000

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measures as the SCREEN Score, AFQT, education, and dependency status. The correlation coefficients presented in Table 27 indicated that the LPQ score had a stronger relationship with measures of military performance than the SCREEN Score and education. The results of the regression analyses were consistent with these results. The SCREEN Score, when included in a regression model with the LPQ score, had a statistically insignificant effect on the three general measures of military performance (see Appendix N). Moreover, when the LPQ score was included in a regression model with the variables race, sex, education, AFQT, marital status, and number of children, its effects on the indices of supervisors' evaluation and the three general measures of military performance were statistically significant (see Appendix O).

Overview. This analysis demonstrated that one can predict the quality of an enlistee's performance in the Navy on the basis of his/her experiences with social institutions prior to joining the Navy. We used three general measures of performance based upon supervisors' evaluations, more detailed supervisors' evaluations measures of an enlistee's involvement with the criminal justice system, and measures of promotions and demotions as dependent variables. An LPQ scale was developed utilizing the general supervisors' evaluations measures. Systematically, this scale distinguished those at different levels of the dependent variables (see Tables 28 through 31 and their graphic descriptions in Appendix P). Moreover, the LPQ was found to be statistically related to the general measures of performance even after such variables as the SCREEN Score, AFQT, education, age, race, and dependency status were controlled.

TABLE 28

Mean of Indices Measuring Military Performance by LPQ
Score for the Air Station Respondents

LPQ Score (Mean = 1000)	Overall Eval. of Performance, Appearance, Adaptability, and Military Behavior	Evaluation of Performance When Compared to Others of Same MOS and Grade	Evaluation of Qualifications for Reenlistment	Range in Number of Cases
954 or less	3.7	2.9	2.5	18-21
955 to 974	4.2	3.6	3.6	43-76
975 to 994	4.3	3.7	3.8	72-118
995 to 1014	4.3	3.9	3.8	117-184
1015 to 1034	4.5	3.9	4.0	66-90
1035 or more	4.7	4.2	4.2	25-46

TABLE 29

Mean Indices of Professional Performance, Military Behavior,
Military Appearance, and Adaptability by LPQ Score for the
Air Station Respondents

LPQ3 Score	Index of Professional Performance	Index of Military Behavior	Index of Military Appearance	Index of Adapt- ability	Range in Number of Cases
954 or less	347.4	387.4	372.3	386.7	18-19
955 to 974	393.2	444.4	412.1	431.6	46-58
975 to 994	403.8	447.9	415.7	446.5	81-88
995 to 1014	405.8	444.3	423.8	445.6	125-133
1015 to 1034	420.0	466.3	435.9	447.4	69-73
1035 or more	447.3	475.5	455.1	476.9	27-30

TABLE 30

Mean Number of Offenses, Days Ever Punished, and
Dollars Ever Punished by LPQ Score for the
Air Station Respondents

LPQ Score (Mean = 1000)	Number of Offenses	Days Ever Punished	Dollars Ever Punished	Number of Cases
954 or less	1.9	39.2	$180.	27
955 to 974	.6	26.4	$66.	79
975 to 994	.6	12.3	$50.	139
995 to 1014	.6	20.8	$48.	203
1015 to 1034	.2	3.8	$24.	97
1035 or more	0	.3	$1.	49-50

TABLE 31

Mean Number of Promotions, Demotions, and Commendations
by LPQ Score for the Air Station Respondents

LPQ3 Score	Promotions	Demotions	Commendations	Number of Cases
954 or less	2.3	.1	.3	27
955 to 974	2.3	.1	.4	79
975 to 994	2.3	.1	.4	138
995 to 1014	2.1	0	.4	203
1015 to 1034	2.1	0	.5	97
1035 or more	2.2	0	.5	50

CONCLUSION

This study showed that a person's premilitary experiences would influence his/her military behavior. Analyzing these relationships and identifying their dynamics were fruitful efforts toward the development of counseling and training programs designed to maximize retention and quality performance. Factors which predict attrition were not altogether the same as factors which predict quality performance. Those who left the Navy before their tour of duty had been completed were not necessarily the same types of persons who stayed in the Navy and performed poorly. The LPQ was independent of traditional predictors which had been used.

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APPENDIX A

Correlation of LPQ Scale Items
With Attrition and Military Advancement

Table A.1

Correlation of the LPQ Family Relationships Scale Items
with Attrition and Military Advancement for the
1977 Navy Recruit Respondents

LPQ Family Relationships Scale Items		Attrition	Military Advancement
a. Family Structure			
V42	Parents separated/divorced	-.0505*	.0902*
b. Time Home			
V15	Doing something with parents	.0210	-.0256
V20	Evenings with my family	-.0008	-.0186
V25	Ran away from home	-.0883*	.1294*
V44	Stayed away from home	-.0318	.0766*
V76	Stayed home only when nothing else to do	.0079	.0536
	Multiple R	.1006*	.1649*
c. Supportive Relationships			
V19	Did something special for parents	-.0193	.0249
V47	Discussed personal matters with parents	.0105	.0065
V59	Parents valued my opinion	-.0309	.0602*
V73	Family close to one another	-.0147	.0100
V75	Parents included me in discussions	.0333	-.0108
V108	Visited relatives	.0359	-.0665*
V113	Worked on projects with parents	.0530*	-.0495
	Multiple R	.0974	.1268*
d. Strained Relationships			
V16	Hostile arguments parents had	-.0365	.0504
V65	Parents wanted me to go to college, I didn't	-.0455	.0734*
V66	Difficulty communicating with parents	-.0580*	.0809*
V107	Got mad at parents	-.0405	.0313*
V112	Hassled with brothers and sisters	.0101	.0432
	Multiple R	.0932*	.1282*
e. Family-Friends			
V30	Friends of parents close to	-.0280	.0082
V31	Friends parents disapproved of	-.0440	.0633*
V49	Participation in community via parents	.0186	-.0079
	Multiple R	.0668*	.0662

*Statistically significant at the .05 level of significance.

Table A.2

Correlation of the LPQ Early Maturity Scale Items
with Attrition and Military Advancement for the
1977 Navy Recruit Respondents

LPQ Early Maturity Scale Items		Attrition	Military Advancement
a. Early Home Independence			
V1	Setting hour for coming in at night	.0596*	-.0879*
V4	Trip away from parents	.0054	.0410
V5	Date for the first time	.0126	-.0449
V6	Set own time schedule	-.0061	.0232
V8	Home on my own	.0266	-.0265
V10	Stopped treating me like a child	.0009	-.0357
	Multiple R	.0731*	.1234*
b. Early Institutional Involvement			
V2	Planning courses during high school	-.0726*	.0991*
V3	Attended summer camp	-.0460	.0530*
V11	Regular part-time jobs	.0050	-.0105
V12	Budgeting my own money	-.0533*	.0555*
V13	Own checking account	-.0130	.0975*
V33	Offices nominated in jr. high school	.0371	-.0052
	Multiple R	.1024*	.1467*
c. Early Driving			
V7	Received my driver's permit	-.0467	.0899*
V14	Bought my first car	-.0355	.0678*
	Multiple R	.0533*	.0991*

*Statistically significant at the .05 level of significance.

Table A.3

Correlation of the LPQ Personal Competence Scale Items
with Attrition and Military Advancement for the
1977 Navy Recruit Respondents

LPQ Personal Competence Scale Items		Attrition	Military Advancement
a. Academic Orientation			
V38	Avoided difficult subjects	-.0301	.1544*
V80	School learning came easy	.0181	.0666*
V109	Wrote letters	.0191	-.0533*
	Multiple R	.0765*	.1697*
b. Reading			
V37	Time in the library	-.0173	.0937*
V46	Good reader	-.0697*	.1021*
V51	Read when entered first grade	.0436	-.0180
V82	Lot of time reading	-.0278	.0838*
V104	Went to libraries	-.0190	.0769*
V110	Read newspapers	-.0749*	.0736*
V117	Read novels	-.0317	.0956*
V120	Read nonfiction books	.0107	.0560*
V124	Read editorials	-.0297	.0935*
V125	Read science fiction	-.0287	.0894*
	Multiple R	.1354*	.1725*
c. Culture			
V101	Attended classical concerts	.0339	-.0391
V103	Visited museums	.0377	-.0053
V111	Went to see plays	.0260	.0062
V116	Did gardening	.0258	-.0196
	Multiple R	.0453	.0496
d. Sports			
V69	Very good swimmer	.0069	.0009
V102	Participated in athletics	-.0531*	.0406
V105	Went boating	.0471	-.0478
V123	Went swimming	.0159	-.0176
	Multiple R	.0782*	.0710

*Statistically significant at the .05 level of significance.

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Table A.4

Correlation of the LPQ Adaptability Scale Items with
Attrition and Military Advancement for the
1977 Navy Recruit Respondents

LPQ Adaptability Scale Items		Attrition	Military Advancement
a. Group Activities			
V22	Extracurricular activities	-.0402	.1007*
V24	School activities participated in	-.0420	.0808*
V84	Experience in team effort	-.0213	.0492
V121	Did volunteer work	.0087	-.0215
	Multiple R	.0559	.1204*
b. Parental Model			
V45	Parents encouraged different friends	.0361	-.0154
V52	Parents friends other racial groups	-.0582*	.0455
V61	Parents encouraged racial friends	-.0355	.0220
	Multiple R	.0934*	.0589
c. Group Leadership			
V41	One who initiated group activities	.0147	.0337
V43	Among first students to learn events	.0388	-.0001
	Multiple R	.0414	.0343
d. New Experiences			
V27	Watching T.V.	-.0166	.0438
V56	Interested in other countries' customs	-.0704*	.0774*
V71	Confident with new situations	.0070	.0376
V115	Made new friends	.0307	-.0467
V126	Traveled out of town	.0189	-.0361
	Multiple R	.0848*	.1161*
e. Sociability			
V29	Other high schools visited	-.0309	.0632*
V32	Friends of another racial group	.0542*	-.0436
V48	More comfortable working alone	-.0221	.0353
V57	Little contact, other racial groups	-.0148	.0261
V96	No trouble fitting into crew	-.0413	.0750*
V114	Participated in school politics	-.0002	.0522*
V119	Went to movies	.0109	-.0071
V122	Played musical instrument	.0513*	-.0244
	Multiple R	.1135*	.1285*

*Statistically significant at the .05 level of significance.

Table A.5

Correlation of the LPQ Vocational Maturity Scale Items with Attrition and Military Advancement for the 1977 Navy Recruit Respondents

LPQ Vocational Maturity Scale Items		Attrition	Military Advancement
a. Career Preparation			
V26	Chores around the house	-.0306	.0054
V28	Number of hours on school work	-.0668*	.0927
V54	Best grades in math and/or science	-.0005	.0716*
V89	Educational requirements of profession	-.0516*	.0891*
V90	Prior training in Navy area pursued	-.0096	.0220
V93	Had skill in which Navy interested	-.0353	.0705*
V94	Learned about Navy before joining	-.0472	.0348
	Multiple R	.0918*	.1489*
b. Career Expectation			
V39	Confident of ability to succeed	-.0301	.0459
V85	Heard Navy schools are good	-.0431	.0614*
V86	Thought Navy atmosphere would use skills	-.0952*	.0923*
V87	Recruiter interview, good/bad points	-.0538*	.0696*
V88	Felt Navy give me self satisfaction	-.1062*	.1052
V91	Definite Navy career objectives	-.1139*	.1503*
V92	Promised advance after boot camp	-.0573*	.2346*
V95	Navy learned skill help as civilian	-.0247	.0533*
V97	Navy prepare for duty assignment	-.0562*	.1197*
V98	Navy training necessary advanced school	-.0470	.1016*
V99	Confident Navy make me skilled person	-.0907*	.0964*
	Multiple R	.1802*	.2833*

*Statistically significant at the .05 level of significance.

Table A.6

Correlation of the LPQ Authority Figures Scale Items
with Attrition and Military Advancement for the
1977 Navy Recruit Respondents

LPQ Authority Figures Scale Items		Attrition	Military Advancement
a. Parents			
V40	Parents often hassled me	.0401	.0153
V55	Resented discipline from parents	-.0391	.0734*
	Multiple R	.0628*	.0748*
b. Teachers			
V17	Teachers positive influence	-.0584*	.1380*
V18	Put out of classes by teachers	-.0181	.0382
V21	Expelled/suspended from high school	-.1069*	.1236*
V23	Disputes with school officials	-.1010*	.1002*
V53	Little sensitivity by officials	-.0462	.1177*
V58	Trouble working under strict teachers	-.0672*	.1221*
V63	Teachers gave grades earned	-.0541*	.0710*
V64	High school principals fail other job	-.0664*	.1039*
V68	Treated unfairly by school principal	-.0911*	.1436*
V72	Respect for authority not shown	.0116	-.0377
V77	Teachers treated me fairly	-.1099*	.1119*
V79	Felt excluded from school activities	-.0301	.0375
V83	School officials forced accept change	-.0386	.0681*
V106	Argued with teachers	-.0811*	.0988*
	Multiple R	.1849*	.2503*
c. Police			
V34	Traffic violations	-.0328	.0026
V60	Best not to trust police	-.0801*	.1405*
V62	Most policemen abuse their authority	-.0552*	.1575*
V70	Police used unreasonable force	-.0590*	.1447*
V74	Police often hassled kids	-.1094*	.1631*
	Multiple R	.1344*	.2053*
d. General Authority			
V35	Unsatisfactory relationship with boss	-.0949*	.1002*
V50	Resisted being bossed	-.0681*	.0566*
V67	Difficult to relax with authority	-.0753*	.1034*
V78	Used marijuana least three occasions	-.0121	.0490
V81	Most retail clerks not very nice	-.0364	.0758*
V118	Drag raced	-.0897*	.1459*
	Multiple R	.1504*	.1923*

*Statistically significant at the .05 level of significance.

APPENDIX B

Significant Results from Stepwise Multiple Regression Analyses
of Attrition and the Index of Military Advancement
on Subscale Items

Table B.1

Statistically Significant Items Resulting from Stepwise
Multiple Regression of Attrition on Models
Composed of Subscale Items*

1. Family Relationships Scale Items

    a. Family Structure Model
        V42   Parents separated/divorced

    b. Time Home Model
        V25   Ran away from home

    c. Supportive Relationships Model
        V59   Parents valued my opinion
        V113. Worked on projects with parents (-)

    d. Strained Relationships Model
        V65   Parents wanted me to go to college, I didn't
        V66   Difficulty communicating with parents

    e. Family-Friends Model
        V30   Friends of parents close to

2. Early Maturity Scale Items

    a. Early Home Independence Model
        V1   Setting hour for coming in at night (-)

    b. Early Institutional Involvement Model
        V2   Planning courses during high school
        V3   Attended summer camp
        V12   Budgeting my own money
        V33   Offices nominated in jr. high school (-)

    c. Early Driving Model
        V7   Received my driver's permit

3. Personal Competence Scale Items

    a. Academic Orientation Model
        V38   Avoided difficult subjects

    b. Reading Model
        V46   Good reader
        V51   Read when entered first grade (-)
        V110   Read newspapers
        V120   Read nonfiction books (-)
        V125   Read science fiction

    d. Sports Model
        V102   Participated in athletics
        V105   Went boating (-)

4. Vocational Maturity Scale Items

    a. Career Preparation Model
        V28   Number of hours on school work
        V89   Educational requirements of profession

4. Vocational Maturity Scale Items (continued)

    b. Career Expectation Model
        V86   Thought Navy atmosphere would use skills
        V88   Felt Navy give me self-satisfaction
        V91   Definite Navy career objectives
        V95   Navy learned skill help as civilian
        V98   Navy training necessary advanced school

5. Adaptability Model

    a. Group Activities Model
        V24   School activities participated in

    b. Parental Model
        V45   Parents encouraged different friends (-)
        V52   Parents friends other racial groups
        V61   Parents encouraged racial friends

    c. Group Leadership Model
        V43   Among first students to learn events (-)

    d. New Experiences Model
        V56   Interested in other countries' customs

    e. Sociability Model
        V32   Friends of another racial group (-)
        V96   No trouble fitting into crew
        V122 Played muscial instrument (-)

6. Authority Figures Scale Items

    a. Parents Model
        V40   Parents often hassled me (-)
        V55   Resented discipline from parents

    b. Teachers Model
        V18   Put out of classes by teachers (-)
        V21   Expelled/suspended from high school
        V23   Disputes with school officials
        V58   Trouble working under strict teachers
        V68   Treated unfairly by school principal
        V77   Teachers treated me fairly

    c. Police Model
        V34   Traffic violations
        V60   Best not to trust police
        V74   Police often hassled kids

    d. General Authority Model
        V35   Unsatisfactory relationship with boss
        V67   Difficult to relax with authority
        V118 Drag raced

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*The minus sign in parentheses (-) indicates that the item has an effect on the dependent variable opposite to that expected.

Table B.2

Statistically Significant Items Resulting from Stepwise Multiple
Regression of the Index of Military Advancement
on Models Composed of Subscale Items*

1. Family Relationships Scale Items.

   a. Family Structure Model
     V42   Parents separated/divorced

   b. Time Home Model
     V20   Evenings with my family (-)
     V25   Ran away from home
     V44   Stayed away from home
     V76   Stayed home only when nothing else to do

   c. Supportive Relationships Model
     V59   Parents valued my opinion
     V108 Visited relatives (-)
     V113 Worked on projects with parents (-)

   d. Strained Relationships Model
     V65   Parents wanted me to go to college, I didn't
     V66   Difficulty communicating with parents
     V107 Got mad at parents

   e. Family-Friends Model
     V30   Friends of parents close to

2. Early Maturity Scale Items

   a. Early Home Independence Model
     V1   Setting hour for coming in at night (-)
     V4   Trip away from parents
     V5   Date for the first time (-)
     V6   Set own time schedule

   b. Early Institutional Involvement Model
     V2   Planning courses during high school
     V3   Attended summer camp
     V11 Regular part-time jobs (-)
     V12 Budgeting my own money
     V13 Own checking account

   c. Early Driving Model
     V7   Received my driver's permit
     V14 Bought my first car

3. Personal Competence Scale Items

   a. Academic Orientation Model
     V38   Avoided difficult subjects
     V80   School learning came easy
     V109 Wrote letters (-)

3. Personal Competence Scale Items (continued)

   b. Reading Model
     V37   Time in the library
     V46   Good reader
     V51   Read when entered first grade (-)
     V124 Read editorials
     V125 Read science fiction

   c. Culture Model
     V101 Attended classical concerts (-)

   d. Sports Model
     V102 Participated in athletics
     V105 Went boating (-)

4. Vocational Maturity Scale Items

   a. Career Preparation Model
     V28   Number of hours on school work
     V54   Best grades in math and/or science
     V89   Educational requirements of profession
     V93   Had skill in which Navy interested

   b. Career Expectation Model
     V91   Definite Navy career objectives
     V92   Promised advance after boot camp
     V97   Navy prepare for duty assignment
     V98   Navy training necessary advanced school

5. Adaptability Model

   a. Group Activities Model
     V22   Extracurricular activities
     V24   School activities participated in
     V121 Did volunteer work (-)

   b. Parental Model
     V52   Parents friends other racial groups

   d. New Experiences Model
     V27   Watching T.V.
     V56   Interested in other countries' customs
     V71   Confident with new situations
     V115 Made new friends (-)
     V126 Traveled out of town (-)

   e. Sociability Model
     V29   Other high school visited
     V32   Friends of another racial group (-)
     V48   More comfortable working alone
     V96   No trouble fitting into crew
     V114 Participated in school politics
     V122 Played musical instrument (-)

6. Authority Figures Scale Items

    a. Parents Model
       V55   Resented discipline from parents

    b. Teachers Model
       V17   Teachers positive influence
       V27   Expelled/suspended from high school
       V58   Trouble working under strict teachers
       V64   High school principals fail other job
       V68   Treated unfairly by school principal
       V77   Teachers treated me fairly

    c. Police Model
       V60   Best not to trust police
       V62   Most policemen abuse their authority
       V70   Police used unreasonable force
       V74   Police often hassled kids

    d. General Authority Model
       V35   Unsatisfactory relationship with boss
       V67   Difficult to relax with authority
       V81   Most retail clerks not very nice
       V118   Drag raced

---

*The minus sign in parentheses (-) indicates that the item has an effect on the dependent variable opposite to that expected.

APPENDIX C

Formulas Used in Computing LPQ Scales

Formulas Used in Computing LPO Scales

1. Computation of standard scores of items:

$$V = ((I - \bar{I})/S_I)(10) + 100;$$

where

  V = standard score of item,
  I = item value for respondent,
  $\bar{I}$ = mean item value for all respondents, and
  S_I = standard deviation of all item values.

The mean of each standard score is 100; the standard deviation is 10.

2. Computation of subscale score:

$$\text{Subscale score} = (V_1 + V_2 + V_3 \cdots V_n)/N$$

where

  V_1 through V_n = all items with a statistically significant partial regression coefficient in multiple regression including all subscale items as independent variables.

  N = the total number of items from V_1 through V_n

All cases with missing data for any item in subscale were assigned a missing data code.

3. Computation of scale score:

$$\text{Scale score} = (\text{Subscale}_1 + \text{Subscale}_2 \cdots \text{Subscale}_n)/N;$$

where

  Subscale_1 through Subscale_n = all subscales with a statistically significant partial regression coefficient in multiple regression including all subscales with significant items as independent variables.

  N = the total number of subscales from Subscale_1 through Subscale_n.

All cases with missing data for any subscale in the analysis were
assigned a missing data code. The LPQ comprises six scales: FAM,
EMAT, COMP, ADAPT, VMAT, and AUTH. The mean of each scale is 100,
and the standard deviations range from 5 to 7.

4. Computation of the total LPQ score:

$$\text{Total LPQ Score} = (FAM + EMAT + COMP + ADAPT + VMAT + AUTH/6)(10);$$

where

FAM, EMAT, COMP, ADAPT, VMAT, AUTH = the six LPQ scales measuring
premilitary family relation-
ships, early maturity, per-
sonal competence, adaptability,
vocational maturity, and
authority figures relation-
ships.

The mean of the LPQ total score is 1000, and the standard deviation
is 25.0.

C-2

1

APPENDIX D

Multiple Regression Results of
Attrition and Military Advancement on LPQ Subscales

Table D.1

Multiple Regression of Attrition on Models Composed of LPQ Subscales for the 1977 Navy Recruit Respondents

| | Regression Coefficients | |
LPQ Scales	Unstandardized	Standardized
Family Relationships Subscales		
Family Structure	-.0019*	-.0519*
Ran away from home	-.0032*	-.0650*
Worked on projects with parents	.0026*	.0717*
Strained Relationships 1	-.0027*	-.0560*
Constant Term	.6850	
Multiple R	.1266	
Multiple R^2	.0160	
Adjusted Multiple R^2	.0132	
Number of Cases	1420	
Early Maturity Subscales		
Setting hour for coming in at night	.0021*	.0569*
Early Institutional Involvement 1	-.0048*	-.0863*
Offices nominated in jr. high school	.0018*	.0520*
Received driver's permit	-.0016*	-.0451*
Constant Term	.4064	
Multiple R	.1200	
Multiple R^2	.0144	
Adjusted Multiple R^2	.0116	
Number of Cases	1385	
Personal Competence Subscales		
Avoided difficult subjects	-.0020*	-.0541*
Reading 1	-.0065*	-.1166*
Read when entered first grade	.0022*	.0617*
Read nonfiction books	.0021*	.0570*
Sports 1	-.0039*	-.0694*
Constant Term	.9623	
Multiple R	.1483	
Multiple R^2	.0220	
Adjusted Multiple R^2	.0186	
Number of Cases	1465	

Table D.1
(continued)

| LPQ Scales | Regression Coefficients | |
	Unstandardized	Standardized
Adaptability Subscales		
Parental Model 1	-.0052*	-.1184*
Parents encouraged different friends	.0031*	.0872*
Friends of another racial group	.0022*	.0636*
Constant Term	.1387	
Multiple R	.1199	
Multiple R^2	.0144	
Adjusted Multiple R^2	.0122	
Number of Cases	1375	
Vocational Maturity Subscales		
Career Preparation 1	-.0021*	-.0416*
Career Expectation 1	-.0082*	-.1321*
Constant Term	1.1869	
Multiple R	.1498	
Multiple R^2	.0224	
Adjusted Multiple R^2	.0211	
Number of Cases	1463	
Authority Figures Subscales		
Parents often hassled me	.0025*	.0701*
Teachers 1	-.0096*	-.1471*
General Authority 1	-.0062*	-.1024*
Constant Term	1.4867	
Multiple R	.2047	
Multiple R^2	.0419	
Adjusted Multiple R^2	.0400	
Number of Cases	1420	

*Statistically significant at the .05 level of significance.

Table D.2

Multiple Regression of Index of Military Advancement on
Models Composed of LPQ Subscales for the
1977 Navy Recruit Respondents

| | Regression Coefficients | |
LPQ Scales	Unstandardized	Standardized
Family Relationships Subscales		
Family Structure	.0096*	.0880*
Time Home 2	.0231*	.1275*
Evening with my friends	-.0058*	-.0512
Family Projects 2	-.0132*	-.0971*
Strained Relationships 2	.0105*	.0642*
Constant Term	.4619	
Multiple R	.2086	
Multiple R^2	.0435	
Adjusted Multiple R^2	.0400	
Number of Cases	1328	
Early Maturity Subscales		
Early Social Independence 2	-.0144*	-.0956*
Early Institutional Involvement 2	.0298*	.1499*
Regular part-time job	-.0055*	-.0500*
Early Driving 2	.0112*	.0836*
Constant Term	.8183	
Multiple R	.1931	
Multiple R^2	.0373	
Adjusted Multiple R^2	.0343	
Number of Cases	1285	
Personal Competence Subscales		
Academic Orientation 2	.0167*	.1169*
Wrote letters	-.0085*	-.0779*
Reading 2	.0259*	.1503*
Read when entered first grade	-.0065*	-.0600*
Attended classical concerts	-.0051*	-.0468*
Constant Term	.6275	
Multiple R	.2162	
Multiple R^2	.0468	
Adjusted Multiple R^2	.0433	
Number of Cases	1387	

Table D.2
(continued)

LPQ Scales	Regression Coefficients	
	Unstandardized	Standardized

Adaptability Subscales

Group Activities 2	.0138*	.1109*
Did volunteer work	-.0048*	-.0436*
Parents friends other racial group	.0051*	.0477*
New Experience 2	.0147*	.0816*
Make new friends	-.0076*	-.0697*
Traveled out of town	-.0044*	-.0412*
Sociability 2	.0164*	.0881*
Friends of another racial group	-.0068*	-.0611*
Played musical instrument	-.0052*	-.0476*

Constant Term	.7754
Multiple R	.2042
Multiple R^2	.0417
Adjusted Multiple R^2	.0350
Number of Cases	1292

Vocational Maturity Subscales

Career Preparation 2	.0115*	.0600*
Career Expectations 2	.0440*	.2417*

Constant Term	-2.6724
Multiple R	.2680
Multiple R^2	.0718
Adjusted Multiple R^2	.0705
Number of Cases	1389

Authority Figures Subscales

Teachers 2	.0352*	.1624*
Police 2	.0138*	.0946*
General Authority 2	.0196*	.0991*

Constant Term	-4.0047
Multiple R	.2764
Multiple R^2	.0764
Adjusted Multiple R^2	.0743
Number of Cases	1329

*Statistically significant at the .05 level of significance.

Table D.3

Multiple Regression of Attrition on LPQ Subscales
and Items for 1977 Navy Recruit Respondents

	Regression Coefficients	
Variables in Regression Model	Unstandardized	Standardized
Family Relationship		
Family Structure	-.0072*	-.1113*
Ran away from home	-.0026*	-.0562*
Worked on projects with parents	.0024*	.0680*
Early Maturity		
Early Institutional Involvement 1	-.0043*	.0760*
Received my driver's permit	-.0025*	-.0687*
Personal Competence		
Reading 1	-.0057*	-.1041*
Read when entered first grade	.0018*	.0511*
Read nonfiction books	.0024*	.0666*
Adaptability		
Parental Model 1	-.0047*	-.1055*
Parents encouraged racial friends	.0034*	.0957*
Vocational Maturity		
Career Expectation 1	-.0055*	-.0880*
Authority Figures		
Parents often hassled me	.0022*	.0618*
Teachers 1	-.0072*	-.1113*
General Authority 1	-.0060*	-.0983*

Constant Term	2.9200
Multiple R	.3038*
Multiple R²	.0923
Adjusted Multiple R²	.0822
Number of Cases	1278

*Statistically significant at the .05 level of significance.

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Table D.4

Multiple Regression of Military Advancement on LPQ Subscales
and Items for 1977 Navy Recruit Respondents

	Regression Coefficients	
Variables in Regression Model	Unstandardized	Standardized
Family Relationship		
Family Structure	.0070*	.0641*
Family Projects 2	-.0134*	-.0984
Time Home 2	.0126*	.0699*
Early Maturity		
Early Institutional Involvement 2	.0191*	.0951*
Early Driving 2	.0118*	.0887*
Personal Competence		
Reading 2	.0211*	.1215*
Read when entered first grade	-.0055*	-.0508*
Went boating	-.0066*	-.0606*
Adaptability		
Did volunteer work	-.0053*	-.0479*
Played musical instrument	-.0067*	-.0611*
Vocational Maturity		
Career Preparation 2	.0145*	.0756*
Career Expectation	.0342*	.1768*
Authority Figures		
Teachers 2	.0206*	.0961*
Police 2	.0099*	.0679*
General Authority 2	.0199*	.1011*

Constant Term	-10.4110	
Multiple R	.4310*	
Multiple R^2	.1858	
Adjusted Multiple R^2	.1752	
Number of Cases	1166	

*Statistically significant at the .05 level of significance.

APPENDIX E

Attrition and Military Advancement Rates
by LPQ1 and LPQ2 Scores

Figure E.1: Percentage attriting and not attriting by LPQ1 score.
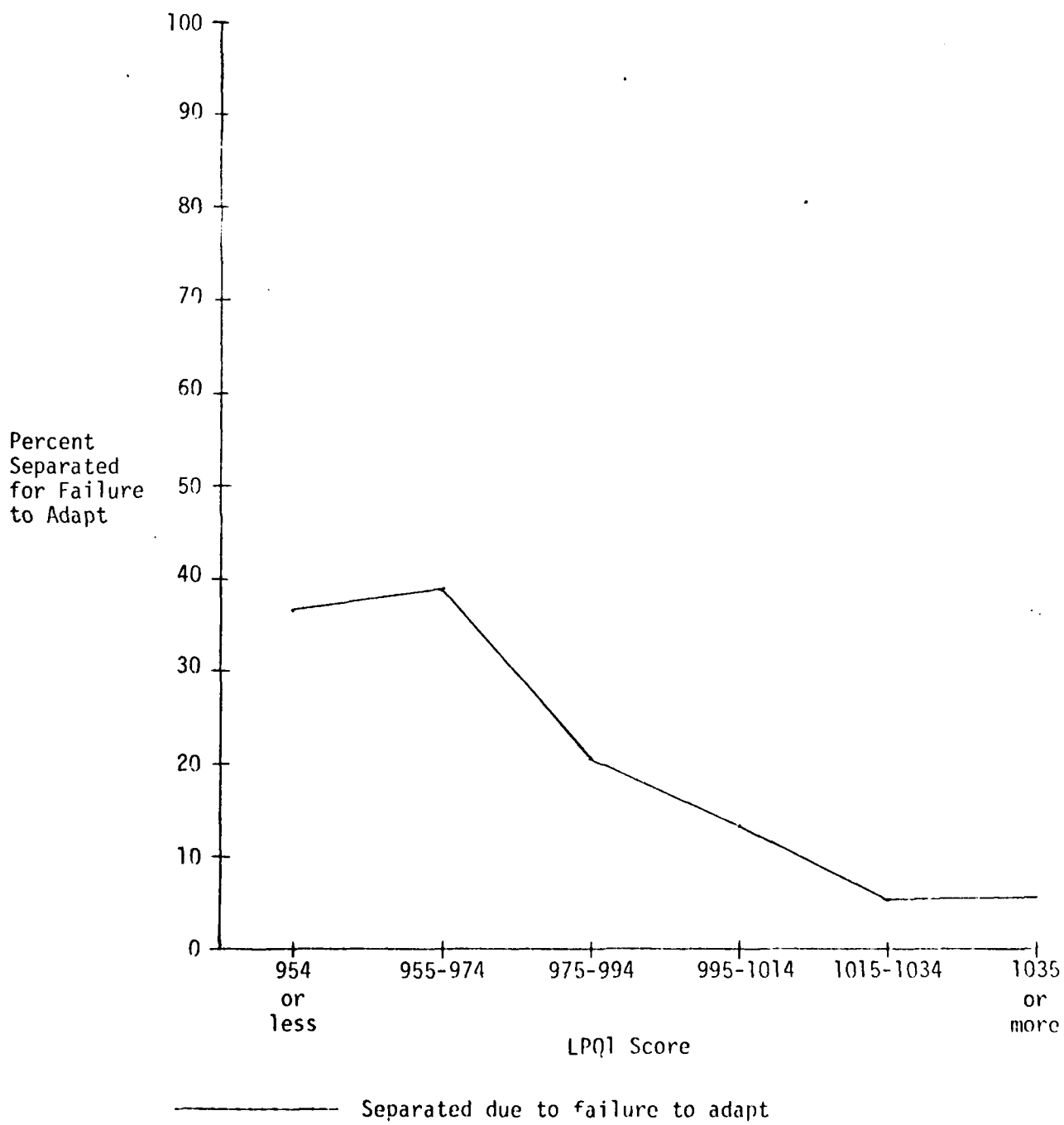
Figure E.2: Attrition by LPQ1 score.

E-2
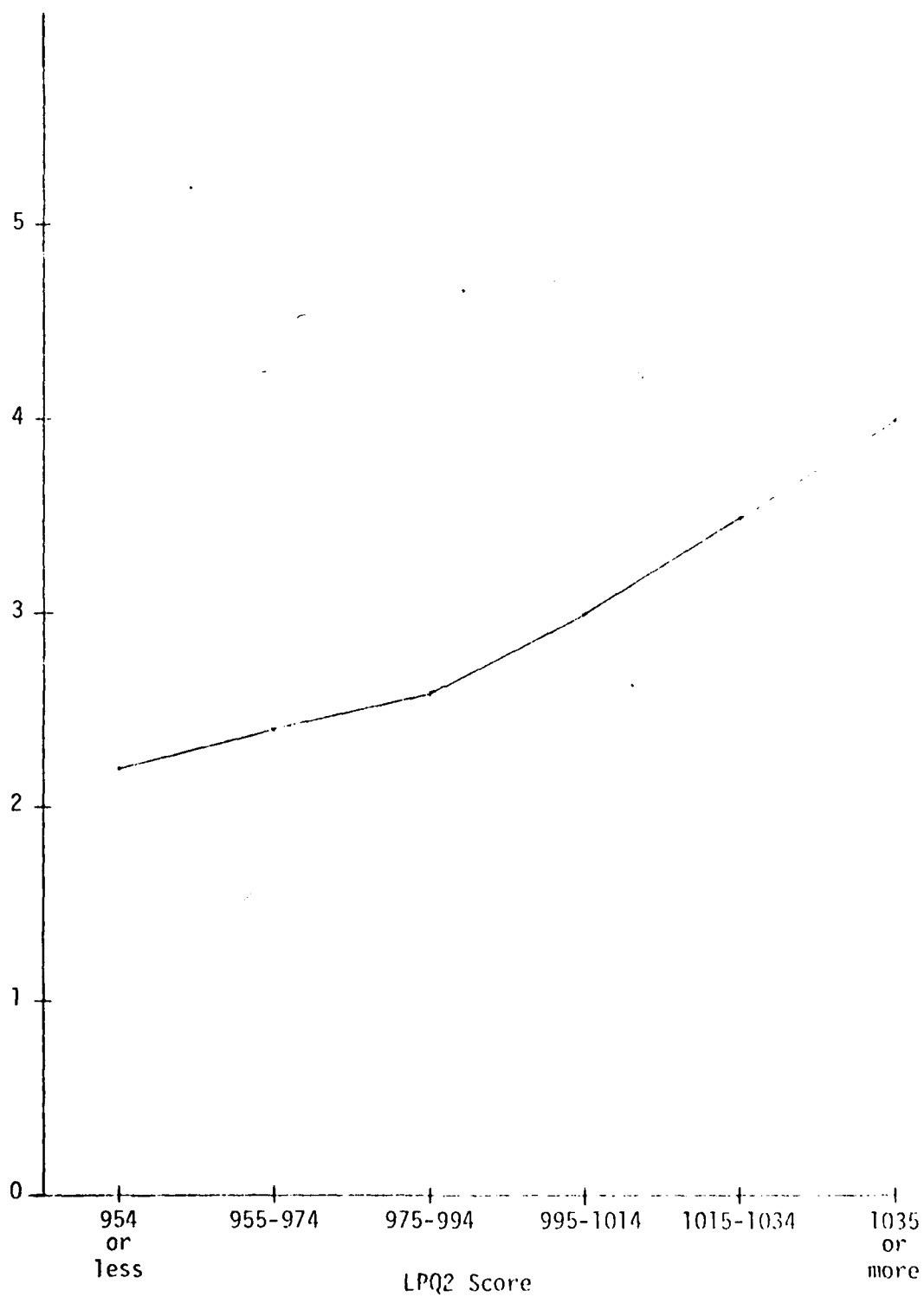
Figure E.3: Military advancement by LPQ2 score.

The y-axis is labeled "Index of Military Advancement" with values 0, 1, 2, 3, 4, 5.

The x-axis is labeled "LPQ2 Score" with categories: 954 or less, 955-974, 975-994, 995-1014, 1015-1034, 1035 or more.

_____ Mean index of military advancement

APPENDIX F

Distributions, Means and/or Standard Deviations
of Naval Air Station Respondents

Table F.1

Distribution of Naval Air Station Respondents
by Sex and Race

	Number	Percent
Sex		
Men	637	83.9
Women	122	16.1
Total	759	100.0
Race		
White	607	80.0
Black	54	7.1
Mexican American	38	5.0
Spanish American	10	1.3
Native American	10	1.3
Asian	18	2.4
Puerto Rican	5	.7
Other	17	2.2
Total	759	100.0

Table F.2

Distribution of Naval Air Station Respondents
by Marital Status and Number of Children

	Number	Percent
Not Married		
No children	392	53.3
One child	13	1.8
More than one child	1	0.1
Married		
No children	212	28.8
One child	82	11.2
More than one child	35	4.8
Total	735	100.0

Table F.3

Means and Standard Deviations of Selected Characteristics
of Naval Air Station Respondents

	Mean	Standard Deviation	Number of Cases
Age (years)	21.9	2.9	748
Months in Navy	32.3	17.1	746
Grade	3.5	0.9	746
Years school completed	12.1	1.1	727

Table F.4

Number of Months Air Station Respondents
Have Been in Navy

Months in Navy	Number	Percent
Less than 12 months	65	8.7
12 to 23 months	153	20.5
24 to 35 months	229	30.7
36 to 47 months	196	26.3
48 months or more	103	13.8
Mean	32.3	
Total	746	100.0

Table F.5

Distribution of Air Station Respondents by Grade

Grade	Number	Percent
E1	6	0.8
E2	79	10.6
E3	266	35.6
E4	290	38.9
E5	105	14.1
Total	746	100.0

Table F.6

Distribution of Air Station Respondents by Rating


```
Aerographer's mate- - - - - - - - - - - - - - - - - 2
Air traffic controller- - - -' - - - - - - - - - - - 24
Aircrew survival equipmentman - - - - - - - - - - 22
Aviation boatswain's mate - - - - - - - - - - - 5
Aviation electrician's mate - - - - - - - - - - - 55
Aviation electronics technician - - - - - - - - - 30
Aviation machinist's mate - - - - - - - - - -'- -147
Aviation maintenance administrationman- - - - - 18
Aviation ordnanceman- - - - - - - - - - - - - - - 11
Aviation storekeeper- - - - - - - - - - - - - - - 24
Aviation structural mechanic- - - - - - - - - - -137
Aviation support equipment technician - - - - - 25
Boatswain's mate- - - - - - - - - - - - - - - - - 3
Builder - - - - - - - - - - - - - - - - - - - - - 9
Construction electrician- - - - - - - - - - - - - 2
Construction mechanic - - - - - - - - - - - - - - 4
Data processing technician- - - - - - - - - - - - 1
Dental technician - - - - - - - - - - - - - - - - 1
Disbursing clerk- - - - - - - - - - - - - - - - - 1
Electronics technician- - - - - - - - - - - - - - 17
Equipment operator- - - - - - - - - - - - - - - - 6
Gunner's mate - - - - - - - - - - - - - - - - - - 1
Hospital corpsman - - - - - - - - - - - - - - - - 6
Journalist- - - - - - - - - - - - - - - - - - - - 1
Machinist's mate- - - - - - - - - - - - - - - - - 1
Mess management specialist- - - - - - - - - - - - 10
Missile technician- - - - - - - - - - - - - - - - 1
Personnelman- - - - - - - - - - - - - - - - - - - 27
Photographer's mate - - - - - - - - - - - - - - - 9
Postal clerk- - - - - - - - - - - - - - - - - - - 3
Radioman- - - - - - - - - - - - - - - - - - - - - 9
Ship's serviceman - - - - - - - - - - - - - - - - 1
Signalman - - - - - - - - - - - - - - - - - - - - 1
Steelworker - - - - - - - - - - - - - - - - - - - 1
Storekeeper - - - - - - - - - - - - - - - - - - - 15
Trademan- - - - - - - - - - - - - - - - - - - - - 46
Utilitiesman- - - - - - - - - - - - - - - - - - - 2
Yeoman- - - - - - - - - - - - - - - - - - - - - - 14
```

APPENDIX G

Distributions of Performance Measures
of Naval Air Station Respondents

END
DATE
FILMED
9-80
DTIC

Table G.1

Distribution of Air Station Respondents by the Rating Index
and Index of Reenlistment Potential

Rating Index:

In comparison to all the enlistees
you have supervised in the particular
job and grade level of the enlistee,
how would you rate his/her performance?

	Number	Percent
Poor	4	0.7
Marginal	42	7.3
Average	155	27.1
Good	242	42.3
Outstanding	129	22.6
Total	572	100.0

Index of Reenlistment Potential:

How would you rate this enlistee in
terms of his/her qualifications for
reenlistment?

	Number	Percent
Poor	26	4.5
Marginal	43	7.5
Average	131	22.9
Good	201	35.2
Outstanding	171	29.9
Total	572	100.0

Table G.2

Number of Offenses Committed, Number of Days Ever Punished,
and Number of Dollars Ever Punished for
Air Station Respondents

	Number	Percent
Number of Offenses		
None	494	78.3
1	72	11.4
2	27	4.3
3	13	2.1
4	12	1.8
5 or more	13	2.1
Total	631	100.0
Number of Days Ever Punished		
None	561	89.0
1 to 30	16	2.5
31 to 60	5	.8
61 to 90	4	.6
91 to 120	10	1.7
121 or more	34	5.4
Total	630	100.0
Number of Dollars Ever Punished		
None	526	83.5
$1 to $100	33	5.2
$101 to $200	19	3.0
$201 to $300	22	3.5
$301 to $400	9	1.4
$401 or more	21	3.4
Total	630	100.0

Table G.3

Number of Promotions, Demotions, and Commendations Received by Air Station Respondents
(Percentage Distribution)

	Number	Percent
Promotions		
None	29	4.6
1	123	19.5
2	240	38.0
3	198	31.4
4 or more	41	6.5
Total	631	100.0
Demotions		
None	602	95.4
1	25	4.0
2 or more	4	.6
Total	631	100.0
Commendations, Awards, etc.		
None	461	73.2
1	105	16.7
2	46	7.3
3 or more	18	2.8
Total	630	100.0

APPENDIX II

Correlations of LPQ Scale Items
With Performance Evaluations by Supervisors

Table H.1

Correlation of LPQ Family Relationships Scale Items with Indices of Performance
Evaluation by Supervisors for Air Station Respondents

LPQ Family Relationships Scale Items	Professional Performance	Military Behavior	Military Appearance	Adaptability	Overall Index	Rating	Reenlistment Potential
a. Family Structure							
V42 Parents separated/divorced	.0613	.0685	.0277	.0462	.0765	.0579	.0874*
b. Time Home							
V15 Doing something with parents	-.0456	.0363	-.0223	-.0521	-.0235	-.0008	.0027
V20 Evenings with my family	.0549	.1427*	.1276*	.0928	.1191*	.0610	.0842*
V25 Ran away from home	.0002	.0421	-.0088	.0152	.0191	.0389	.0388
V44 Stayed away from home	.1010*	.1219*	.0392	.0828*	.1320*	.1103*	.1033*
V76 Stayed home only when nothing else to do	.0636	.0834	.0317	.0135	.0854	.0776	.0754
Multiple R							
c. Supportive Relationships							
V19 Did something special for parents	-.0101	.0168	.0225	.0119	.0058	.0110	.0062
V47 Discussed personal matters with parents	-.0306	-.0016	.0155	-.0291	-.0101	.0078	.0215
V59 Parents valued my opinion	.0351	.0035	.0650	-.0009	.0419	.0698	.0414
V73 Family close to one another	-.0401	.0184	.0030	.0230	.0127	.0350	.0076
V75 Parents included me in discussions	-.0088	-.1241*	-.0349	-.0496	-.0620	.0335	-.0097
V108 Visited relatives	.0111	-.0406	.0184	.0045	-.0183	.0283	.0045
V113 Worked on projects with parents	.0251	-.0074	.0169	.0065	.0223	.0732	.0850*
Multiple R							
d. Strained Relationships							
V16 Hostile arguments parents had	.0285	.0595	.0091	.0336	.0524	.0830*	.0576
V65 Parents wanted me go college, I didn't	.0362	.0538	.0102	.0582	.0284	.0759	.0835*
V66 Difficulty communicating with parents	.0408	.0595	.0640	.0093	.0553	.0229	.0211
V107 Got mad at parents	.1457*	.1639*	.1071*	.1162*	.1723*	.1116*	.1130*
V112 Hassled with brothers and sisters	.0214	.0197	.0289	-.0070	.0098	.0723	.0739
Multiple R							

(continued)

Table H.1
(continued)

LPQ Family Relationships Scale Items	Professional Military Performance	Military Behavior	Military Appearance	Adapt-ability	Overall Index	Rating	Reenlistment Potential
e. Family-Friends							
V30 Friends of parents close to	.0360	.0365	.0342	.0047	.0156	.0412	.0410
V31 Friends parents disapproved of	.0231	.1070*	.0990*	-.0002	.0682	.0304	.0651
V49 Participation in community via parents	-.0553	.0031	-.0308	-.0377	-.0126	.0033	.0156
Multiple R							

*Statistically significant at the .05 level of significance.

Table H.2

Correlation of LPQ Early Maturity Scale Items with Indices of Performance
Evaluation by Supervisors for Air Station Respondents

LPQ Early Maturity Scale Items	Professional Performance	Military Behavior	Military Appearance	Adapt-ability	Overall Index	Rating	Reenlistment Potential
a. Early Home Independence							
V1 Setting hour for coming in at night	.0067	.0116	-.0586	.0261	-.0202	-.0374	-.0613
V4 Trip away from parents	-.0082	-.0087	.0089	-.0221	.0047	.0375	-.0167
V5 Date for the first time	-.0410	-.0641	-.0621	-.0890	-.0763	-.0947*	-.0766
V6 Set own time schedule	.0330	.0230	.0505	.0074	.0168	.0031	-.0225
V8 Home on my own	.0588	-.0123	-.0322	-.0849	-.0070	.0367	.0151
V10 Stopped treating me like a child	.0710	-.0230	.0286	.0185	.0352	.0529	.0390
Multiple R							
b. Early Institutional Involvement							
V2 Planning courses during high school	.0170	-.0460	.0631	.0318	.0065	.0351	.0236
V3 Attended summer camp	-.0193	-.0653	-.0067	-.0453	-.0347	.0017	-.0465
V11 Regular part-time jobs	.0342	.0174	-.0118	.0111	-.0171	.0293	.0237
V12 Budgeting my own money	.0128	-.0555	-.0109	-.0045	-.0319	.0003	-.0152
V13 Own checking account	.0007	-.0251	.0330	-.0370	-.0193	.0351	.0633
V33 Offices nominated in jr. high school	.1284*	.1051*	.1612*	.1014*	.1379*	.0682	.0688
Multiple R							
c. Early Driving							
V7 Received my driver's permit	-.0823	-.1124*	-.0911	-.1432*	-.1372	-.0734	-.0584
V14 Bought my first car	-.0743	-.1105*	-.1386*	-.1049*	-.1422	-.1004	-.0995
Multiple R							

*Statistically significant at the .05 level of significance.

Table H.3

Correlation of LPQ Personal Competence Scale Items with Indices of Performance Evaluation by Supervisors for Air Station Respondents

LPQ Personal Competence Scale Items	Professional Performance	Military Behavior	Military Appearance	Adapt-ability	Overall Index	Rating	Reenlistment Potential
a. Academic Orientation							
V38 Avoided difficult subjects	.0871	.0561	.1009*	.0958*	.0885	.0860*	.0833
V80 School learning came easy	.0805	.0074	.0722	.0751	.0741	.0530	.0221
V109 Wrote letters	.0410	.1680*	.0752	.0853	.1184*	.0323	.0705
Multiple R							
b. Reading							
V37 Time in the library	.0187	.0032	.0138	-.0093	-.0068	.0362	.0271
V46 Good reader	.0795	.0385	.0600	.0194	.0597	.0458	.0366
V51 Read when entered first grade	.0300	-.0737	-.0302	-.0208	-.0191	.0147	.0015
V82 Lot of time reading	.0390	-.0087	.0117	-.0239	.0119	.0158	.0040
V104 Went to libraries	.0417	.1061*	.0497	.0324	.0776	.0046	.0116
V110 Read newspapers	.0306	.0933	.0135	.0124	.0383	-.0252	-.0035
V117 Read novels	.0168	.0265	-.0114	-.0002	.0106	.0228	-.0157
V120 Read nonfiction books	.0165	.0562	.0274	.0178	.0387	.0267	-.0218
V124 Read editorials	.0547	.1516*	.0600	.1250*	.1198*	.0301	.0095
V125 Read science fiction	-.0190	.0225	-.0363	-.0253	-.0112	-.0257	-.0846*
Multiple R							
c. Culture							
V101 Attended classical concerts	-.0019	.0578	.0752	.0610	.0534	.0462	.0530
V103 Visited museums	.0355	.1125*	.0540	.0287	.0585	.0273	.0545
V111 Went to see plays	.0754	.1089*	.1639*	.0900	.1366*	.0863*	.0677
V116 Did gardening	.0337	.0373	.0412	.0148	.0525	.0155	.0276
Multiple R							
d. Sports							
V69 Very good swimmer	-.0290	-.1324*	-.0559	-.0406	-.0620	-.0389	-.0570
V102 Participated in athletics	-.0801	-.0366	-.0321	-.0207	-.0359	-.0538	-.0589
V105 Went boating	-.0647	-.0646	-.0792	-.0590	-.0775	-.0699	-.0891*
V123 Went swimming	-.0011	-.0280	.0218	-.0392	-.0236	-.0013	-.0175
Multiple R							

*Statistically significant at the .05 level of significance.

Table H.4

Correlation of LPQ Vocational Maturity Scale Items with Indices of Performance
Evaluation by Supervisors for Air Station Respondents

LPQ Vocational Maturity Scale Items	Professional Performance	Military Behavior	Military Appearance	Adapt-ability	Overall Index	Rating	Reenlistment Potential
a. Career Preparation							
V26 Chores around the house	.0067	-.0089	-.0056	.0439	-.0170	.0455	.0624
V28 Number of hours on school work	-.0076	.0766	-.0092	.0078	.0346	.0213	.0029
V54 Best grades in math and/or science	.0287	.0526	-.0440	.0330	.0690	.0260	.0036
V89 Educational requirements of profession	.1017*	-.0064	.0247	.0619	.0611	.0864*	.0765
V90 Prior training in Navy area pursued	.1428*	.0341	.0706	.1155*	.1161*	.0867*	.0817*
V93 Had skill in which Navy interested	.0254	.0506	.0223	.1021*	.0574	.0595	.0498
V94 Learned about Navy before joining	.0289	.0343	-.0034	.0091	-.0046	.0587	.0409
Multiple R							
b. Career Expectation							
V39 Confident of ability to succeed	.0276	-.0184	.0120	.0696	.0496	.0614	.0505
V85 Heard Navy schools are good	.0628	.1326*	.0660	.0968*	.0708	.0802*	.0977*
V86 Thought Navy atmosphere would use skills	.0124	.0300	-.0290	-.0065	.0031	.0097	-.0079
V87 Recruiter interview, good/bad points	-.0485	.0539	.0431	.0058	.0219	-.0398	-.0207
V88 Felt Navy give me self-satisfaction	-.0009	.0350	-.0184	.0728	.0026	.0530	.0567
V91 Definite Navy career objectives	.0101	.0284	.0143	.0860	.0341	-.0293	-.0040
V92 Promised advance after boot camp	-.0910	-.0649	-.0434	-.1047*	-.1246*	-.0575	-.0405
V95 Navy learned skill help as civilian	-.0070	.0539	-.0343	.0065	.0022	.0190	.0140
V97 Navy prepare for duty assignment	-.0356	-.0045	-.0580	-.0066	-.0264	-.0388	.0005
V98 Navy training necessary advanced school	.0083	.0326	.0198	-.0148	.0037	-.0302	-.0165
V99 Confident Navy make me skilled person	-.0227	-.0238	-.0420	-.0348	-.0446	-.0206	-.0337
Multiple R							

*Statistically significant at the .05 level of significance.

Table H.5

Correlation of LPQ Adaptability Scale Items with Indices of Performance Evaluation by Supervisors for Air Station Respondents

LPQ Adaptability Scale Items	Professional Performance	Military Behavior	Military Appearance	Adaptability	Overall Index	Rating	Reenlistment Potential
a. Group Activities							
V22 Extracurricular activities	.0689	.0904	.1036*	.0741	.0905	.0391	.0301
V24 School activities participated in	.0622	.0585	.0786	.0442	.0805	.0374	.0747
V84 Experience in team effort	.0300	.0351	.0325	.0720	.0205	.0371	.0575
V121 Did volunteer work	.0723	.0729	.0727	.0846	.0911	.0536	.0054
Multiple R							
b. Parental Model							
V45 Parents encouraged different friends	.0660	.0253	.0398	.0243	.0482	.0874*	.0802
V52 Parents friends other racial groups	.0097	-.0622	-.0567	-.0408	-.0145	-.0372	-.0239
V61 Parents encouraged racial friends	.1318*	.1177*	.1092*	.0779	.1535*	.0706	.0720
Multiple R							
c. Group Leadership							
V41 One who initiated group activities	.0435	.0344	.0649	.0633	.0393	.0573	.0488
V43 Among first students to learn events	.0593	.0756	.0704	.0341	.0741	.0377	.0549
Multiple R							
d. New Experience							
V27 Watching T.V.	.0299	-.0179	.0340	-.0440	.0138	-.0197	-.0095
V56 Interested in other countries' customs	.0219	.0490	.0601	-.0048	.0356	.0078	-.0103
V71 Confident with new situations	.0308	-.0876	-.0064	-.0015	.0011	.0007	-.0310
V115 Made new friends	.0839	.0257	.0697	.0735	.0842	.0940*	.0757
V126 Traveled out of town	.0384	.0112	.0276	.0602	.0310	.0568	.0671
Multiple R							

(continued)

Table H.5
(continued)

LPQ Adaptability Scale Items	Professional Performance	Military Behavior	Military Appearance	Adapt-ability	Overall Index	Rating	Reenlistment Potential
e. Sociability							
V29 Other high schools visited	.0414	-.0068	.0193	.0303	-.0070	.0221	.0019
V32 Friends of another racial group	-.0812	-.0943	-.1144*	-.0584	-.1097*	-.0797	-.0750
V48 More comfortable working alone	-.1220*	-.0919	-.0842	-.0687	-.1486*	-.0506	-.0258
V57 Little contact, other racial groups	.0190	-.0070	.0332	.0344	.0419	-.0114	.0169
V96 No trouble fitting into crew	-.1413*	-.1263*	-.1143*	-.1255*	-.1554*	-.0585	-.0563
V114 Participated in school politics	.0180	.0281	.0618	.0286	.0216	.0455	.0356
V119 Went to movies	-.0530	-.0581	-.0797	-.0359	-.0755	-.0199	-.0292
V122 Played musical instrument	-.0681	-.0358	.0088	-.1366*	-.0914	-.0756	-.0216
Multiple R							

*Statistically significant at the .05 level of significance.

Table H.6

Correlation of LPQ Authority Figures Scale Items with Indices of Performance
Evaluation by Supervisors for Air Station Respondents

LPQ Authority Figures Scale Items	Professional Performance	Military Behavior	Military Appearance	Adapt- ability	Overall Index	Rating	Reenlistment Potential
a. Parents							
V40 Parents often hassled me	.1046*	.1394*	.1199*	.0355	.1307*	.0722	.0989*
V55 Resented discipline from parents	.0591	.1299*	.0363	.0120	.0928	.0668	.0762
Multiple R							
b. Teachers							
V17 Teachers positive influence	.0249	.0785	.0786	.0682	.0786	.0377	.0273
V18 Put out of classes by teachers	.0928	.1381*	.1518*	.0647	.1416*	.1243*	.1464*
V21 Expelled/suspended from high school	-.0308	.0961	.0618	.0166	.0705	-.0115	.0587
V23 Disputes with school officials	.1056*	.2190*	.1345*	.0971*	.1756*	.1107*	.1738*
V53 Little sensitivity by officials	.0519	.0664	.1072*	.0684	.0778	.0761	.0595
V58 Trouble working under strict teachers	.0472	.0884	.0770	.0503	.0723	.0604	.0791
V63 Teachers gave grades earned	.1042*	.0115	.0778	.0717	.0679	.0617	.0733
V64 High school principals fail other job	.0629	.0397	.0316	.0111	.0275	.0850*	.0788
V68 Treated unfairly by school principal	.0413	.0659	.1805*	.0669	.0868	.0969*	.1203*
V72 Respect for authority not shown	.0088	-.0983*	-.0740	-.0211	-.0583	-.0001	-.0722
V77 Teachers treated me fairly	.0808	.0803	.0716	.0496	.0768	.0438	.0622
V79 Felt excluded from school activities	.1208*	.0281	.0590	.0945*	.1025*	.1263*	.0618
V83 School officials forced accept change	.1212*	.0910	.1312*	.0712	.1443*	.0634	.0803
V106 Argued with teachers	.0580	.1521*	.0930	.0349	.0998	.0944*	.1433*
Multiple R							
c. Police							
V34 Traffic violations	-.0515	-.0054	.1123*	.0348	.0223	.0147	.0430
V60 Best not to trust police	.0844	.1149*	.1681*	.0818	.1387*	.0725	.1329*
V62 Most policemen abuse their authority	.0844	.1387*	.1728*	.0332	.1228*	.0857*	.1135*
V70 Police used unreasonable force	.0625	.1162*	.1265*	.0242	.1029*	.0942*	.1058*
V74 Police often hassled kids	-.0002	.0731	.0918	.0206	.0622	.0036	.0597
Multiple R							

(continued)

Table H.6
(continued)

LPQ Authority Figures Scale Items	Professional Performance	Military Behavior	Military Appearance	Adapt- ability	Overall Index	Rating	Reenlistment Potential
d. General							
V35 Unsatisfactory relationship with boss	.0194	.0323	.0298	-.0060	.0292	.0538	.0602
V50 Resisted being bossed	.0879	.0760	.1073*	.0722	.1075*	.0536	.0923*
V67 Difficult to relax with authority	.0916	.0647	.0820	.0552	.0995	.0571	.0205
V78 Used marijuana least three occasions	.0408	.1668*	.1355*	.0917	.1098*	.0642	.1363*
V81 Most retail clerks not very nice	-.0089	.0299	.0524	-.0102	.0205	.0761	.0770
V118 Drag raced	.0020	.0947	.0804	.0364	.0740	.0701	.1193*
Multiple R							

*Statistically significant at the .05 level of significance.

APPENDIX I

Correlation of LPQ Scale Items with
Number of Promotions, Demotions, Commendations and Offenses

Table I.1

Correlation of LPQ Family Relationships Scale Items with Number of Promotions,
Demotions, Commendations, and Offenses for Air Station Respondents

LPQ Family Relationships Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses		
				Number	Days Punished	Dollars Punished
a. Family Structure						
V42 Parents separated/divorced	.0029	.0036	-.0178	-.0252	.0588	.0045
b. Time Home						
V15 Doing something with parents	.0650	.0575	.0450	.0129	-.0015	-.0141
V20 Evenings with my family	.0247	-.0692	.0285	-.0624	-.0431	-.0455
V25 Ran away from home	-.0277	-.0601	.0423	-.0730	-.0242	-.0061
V44 Stayed away from home	.0262	-.0665	.0459	-.1148*	-.0813*	-.1041*
V76 Stayed home only when nothing else to do	.0100	-.0001	-.0174	-.0787*	-.0145	-.0733
Multiple R						
c. Supportive Relationships						
V19 Did something special for parents	.0011	-.0187	.0014	-.0263	-.0379	-.0448
V47 Discussed personal matters with parents	.0392	.0196	-.0240	-.0274	.0095	-.0033
V59 Parents valued my opinion	.0626	-.0626	.0288	-.0609	-.0079	-.0393
V73 Family close to one another	-.0228	-.0049	-.0352	-.0386	-.0146	-.0445
V75 Parents included me in discussions	.0720	.0618	-.0154	.0074	.0188	.0033
V108 Visited relatives	-.0089	-.0220	.0076	-.0006	.0150	-.0262
V113 Worked on projects with parents	.0383	-.0033	.0416	-.0238	-.0223	.0109
Multiple R						
d. Strained Relationships						
V16 Hostile arguments parents had	.0486	-.0086	.0044	-.0831*	.0733	.0352
V55 Parents wanted me go college, I didn't	.0791*	-.0063	.0722	-.0332	-.0130	-.0545
V56 Difficulty communicating with parents	.0339	-.0242	.0211	-.0806*	-.0162	-.0136
V107 Got mad at parents	.0171	-.0497	.0617	-.1297*	-.0332	-.0650
V112 Hassled with brothers and sisters	.0282	.0142	.0409	-.0895*	.0209	-.0171
Multiple R						

(continued)

Table I.1
(continued)

LPQ Family Relationships Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses		
				Number	Days Punished	Dollars Punished
e. Family-Friends						
V30 Friends of parents close to	.0180	.0009	.0209	-.0364	-.0361	-.0045
V31 Friends parents disapproved of	-.0238	-.0651	.0827*	-.1576*	-.0889*	-.1386*
V49 Participation in community via parents	.0159	.0367	-.0464	-.0297	-.0284	.0342
Multiple R						

*Statistically significant at the .05 level of significance.

Table I.2

Correlation of LPQ Early Maturity Scale Items with Number of Promotions, Demotions, Commendations, and Offenses for Air Station Respondents

LPQ Early Maturity Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses		
				Number	Days Punished	Dollars Punished
a. Early Home Independence						
V1 Setting hour for coming in at night	-.0188	-.0130	-.0564	.0199	-.0288	-.0526
V4 Trip away from parents	.0123	.0247	-.0068	.0316	.0390	.0105
V5 Date for the first time	.0532	.0389	-.0737	.0688	.0622	.0180
V6 Set own time schedule	.0653	-.0278	.0385	.0353	.0201	-.0048
V8 Home on my own	.0324	-.0054	.0332	.0675	-.0042	.0070
V10 Stopped treating me like a child	.0850*	-.0392	-.0029	.0981*	-.0039	.0345
Multiple R						
b. Early Institutional Involvement						
V2 Planning courses during high school	.0193	-.0241	.0567	-.0139	-.0506	-.0588
V3 Attended summer camp	.0061	-.0038	-.0651	.0879*	.1347*	.0475
V11 Regular part-time jobs	.0224	-.0391	.0274	.0258	.0123	-.0032
V12 Budgeting my own money	.0153	-.0333	.0211	.0505	.0036	-.0024
V13 Own checking account	-.0398	.0009	-.0238	-.0156	.0018	.0107
V33 Offices nominated in jr. high school	-.0309	-.0400	.0216	-.0317	-.0359	-.0456
Multiple R						
c. Early Driving						
V7 Received my driver's permit	.0014	.0200	-.0374	.0122	.0491	.0341
V14 Bought my first car	.0541	.0537	-.0533	.0719	.0470	.0808*
Multiple R						

*Statistically significant at the .05 level of significance.

Table I.3

Correlation of LPQ Personal Competence Scale Items with Number of Promotions, Demotions, Commendations, and Offenses for Air Station Respondents

LPQ Personal Competence Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses Number	Offenses Days Punished	Offenses Dollars Punished
a. Academic Orientation						
V38 Avoided difficult subjects	-.0489	-.0048	-.0556	-.0489	-.0048	-.0556
V80 School learning came easy	-.0193	.0387	-.0358	-.0193	.0387	-.0358
V109 Wrote letters	-.0831*	-.0787*	-.1071*	-.0831*	-.0780*	-.1071*
Multiple R						
b. Reading						
V37 Time in the library	.0088	-.0156	-.0195	.0088	-.0156	-.0195
V46 Good reader	.0324	.0311	-.0038	.0324	.0311	-.0038
V51 Read when entered first grade	.0008	-.0302	-.0297	.0008	-.0302	-.0297
V82 Lot of time reading	.0135	-.0031	-.0180	.0135	-.0031	-.0180
V104 Went to libraries	-.0641	-.0655	-.0838*	-.0641	-.0655	-.0838*
V110 Read newspapers	-.0880*	-.0579	-.0471	-.0880*	-.0579	-.0471
V117 Read novels	-.0132	-.0746	-.0808*	-.0132	-.0746	-.0808*
V120 Read nonfiction books	-.0439	-.0509	-.0762	-.0439	-.0509	-.0762
V124 Read editorials	-.0506	-.0827*	-.0620	-.0506	-.0827*	-.0620
V125 Read science fiction	.0068	.0078	-.0103	.0068	.0078	-.0103
Multiple R						
c. Culture						
V101 Attended classical concerts	-.0173	-.0879*	-.0395	-.0173	-.0879*	-.0395
V103 Visited museums	-.0157	-.0271	-.0686	-.0157	-.0271	-.0686
V111 Went to see plays	-.0108	-.1020	-.0679	-.0108	-.1020*	-.0679
V116 Did gardening	-.0317	-.0485	.0326	-.0317	-.0485	.0326
Multiple R						
d. Sports						
V69 Very good swimmer	.0772*	.0492	.0983*	.0772*	.0492	.0983*
V102 Participated in athletics	.0625	.0549	.0653	.0625	.0549	.0653
V105 Went boating	.0901*	.0623	.0577	.0901*	.0623	.0577
V123 Went swimming	.0495	.0256	.0480	.0495	.0256	.0480
Multiple R						

*Statistically significant at the .05 level of significance.

Table I.4

Correlation of LPQ Vocational Maturity Scale Items with Number of Promotions,
Demotions, Commendations, and Offenses for Air Station Respondents

LPQ Vocational Maturity Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses Number	Offenses Days Punished	Offenses Dollars Punished
a. Career Preparation						
V26 Chores around the house	.0965*	-.0016	.0760	.0037	-.0219	.0021
V28 Number of hours on school work	.0483	.0153	.0244	-.0528	-.0007	-.0922*
V54 Best grades in math and/or science	.0142	-.0353	.0099	-.0601	.0028	-.0930*
V89 Educational requirements of profession	-.0547	-.0202	-.0467	-.0536	.0109	.0071
V90 Prior training in Navy area pursued	-.0680	-.0290	.0583	-.0670	.0246	-.0719
V93 Had skill in which Navy interested	-.0485	-.0003	-.0515	-.0256	.0143	-.0698
V94 Learned about Navy before joining	-.0900*	-.0547	-.0536	-.0970*	-.0067	-.0309*
Multiple R						
b. Career Expectation						
V39 Confident of ability to succeed	.0100	.0074	-.0315	-.0404	.0523	.0431
V85 Heard Navy schools are good	-.0709	-.0284	-.0359	-.0421	-.0617	-.0759
V86 Thought Navy atmosphere would use skills	-.0416	-.0647	-.0206	-.0434	-.0246	-.0203
V87 Recruiter interview, good/bad points	-.0828*	-.0288	.0084	-.0090	-.0561	-.0355
V88 Felt Navy give me self satisfaction	-.0232	-.0475	-.0072	-.0396	-.0355	-.0118
V91 Definite Navy career objectives	-.0885*	-.0475	-.1101*	-.0181	-.0907*	-.0342*
V92 Promised advance after boot camp	-.0521	-.0234	-.0400	-.0058	-.0312	-.0214
V95 Navy learned skill help as civilian	-.0166	-.0541	-.0003	-.0296	.0056	.0501
V97 Navy prepare for duty assignment	.0611	-.0316	.0359	.0416	.0372	.0275
V98 Navy training necessary advanced school	.0202	-.0416	.0736	.0041	-.0088	-.0836*
V99 Confident Navy make me skilled person	.0115	.0532	-.0094	.0560	-.0332	-.0072
Multiple R						

*Statistically significant at the .05 level of significance.

Table I.5

Correlation of LPQ Adaptability Scale Items with Number of Promotions,
Demotions, Commendations, and Offenses For Air Station Respondents

LPQ Adaptability Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses Number	Offenses Days Punished	Offenses Dollars Punished
a. Group Activities						
V22 Extracurricular activities	.0189	-.0635	.0180	-.0380	-.0434	-.0443
V24 School activities participated in	.0196	-.0754	-.0160	-.0319	-.0551	-.0504
V84 Experience in team effort	-.0678	.0064	-.0284	-.0469	-.0108	-.0449
V121 Did volunteer work	-.0302	-.0107	.0360	-.0392	-.0236	-.0597
Multiple R						
b. Parental Model						
V45 Parents encouraged different friends	-.0756	-.0295	-.0418	-.0599	.0187	-.0569
V52 Parents friends other racial groups	-.0364	.0469	-.0325	.0103	.0225	-.0154
V61 Parents encouraged racial friends	-.1003*	-.0459	-.0499	-.0838*	-.0708	-.0883*
Multiple R						
c. Group Leadership						
V41 One who initiated group activities	.0107	.0473	-.0427	-.0064	.0603	.0295
V43 Among first students to learn events	-.0394	.0121	-.0589	-.0423	.0124	.0353
Multiple R						
d. New Experiences						
V27 Watching T.V.	.0483	.0153	.0244	.0168	-.0382	.0201
V56 Interested in other countries' customs	-.0172	-.0748	.0160	.0092	-.0140	-.0472
V71 Confident with new situations	.0660	.0270	-.0034	.0504	.0118	-.0158
V115 Made new friends	.0120	.0281	.0485	.0365	-.0086	-.0506
V126 Traveled out of town	-.0405	-.0375	-.0227	.0040	.0046	-.0050
Multiple R						

(continued)

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Table I.5
(continued)

LPQ Adaptability Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses Number	Offenses Days Punished	Offenses Dollars Punished
e. Sociability						
V29 Other high schools visited	-.0254	-.0578	-.0476	-.0438	-.0216	-.0451
V32 Friends of another racial group	-.0534	-.0015	-.0411	.1051*	.0096	.0024
V48 More comfortable working alone	-.0504	.0300	.0072	.1030*	.0286	.0327
V57 Little contact, other racial groups	-.0402	.0061	-.0365	-.0645	.0461	-.0434
V96 No trouble fitting into crew	-.0321	-.0278	-.0237	.0457	.0078	-.0048
V114 Participated in school politics	.0734	-.0143	-.0045	.0389	-.0407	-.0136
V119 Went to movies	-.0218	-.0513	.0114	.0036	.0143	.0021
V122 Played musical instrument	-.0464	.0617	-.0183	-.0072	-.0902*	-.0286
Multiple R						

*Statistically significant at the .05 level of significance.

Table I.6

Correlation of LPQ Authority Figures Scale Items with Number of Promotions,
Demotions, Commendations, and Offenses for Air Station Respondents

LPQ Authority Figures Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses		
				Number	Days Punished	Dollars Punished
a. Parents						
V40 Parents often hassled me	.1301	-.0022	.0658	-.0894*	.0221	-.0333
V55 Resented discipline from parents	.0430	-.0322	.0809*	-.0989*	-.0788*	-.1121*
Multiple R						
b. Teachers						
V17 Teachers positive influence	.0088	-.0439	.0119	-.0129	-.0370	-.0218
V18 Put out of classes by teachers	.0469	-.0314	.0913*	-.0625	-.0113	-.0288
V21 Expelled/suspended from high school	.0306	.0045	.0618	-.0174	-.0276	-.0220
V23 Disputes with school officials	-.0355	-.0554	.0777*	-.1914*	-.1393*	-.1501*
V53 Little sensitivity by officials	-.0364	.0469	-.0325	-.0667*	-.0217	-.0523
V58 Trouble working under strict teachers	.1105*	.0114	.0867*	-.0128	-.0285	-.0055
V63 Teachers gave grades earned	-.0179	-.0008	.0367	.0674	.0140	.0648
V64 High school principals fail other job	-.0102	.0106	.0288	-.0876*	-.0300	-.0665
V68 Treated unfairly by school principal	-.0060	-.0030	-.0803*	-.0891*	-.0517	-.1152*
V72 Respect for authority not shown	-.0627	.0420	.0223	.0932*	.1306*	.1093*
V77 Teachers treated me fairly	-.0021	-.1647*	.0231	-.0169	-.0951*	-.1460*
V79 Felt excluded from school activities	.0106	.0300	.0200	.0017	.0560	.0170
V83 School officials forced accept change	-.0278	-.0133	.0238	-.1115*	-.0042	-.0157
V105 Argued with teachers	.0333	.0005	.0056	-.1259*	-.0302	-.0401
Multiple R						
c. Police						
V34 Traffic violations	.0419	-.0010	.0368	-.0104	-.0064	.0165
V60 Best not to trust police	.0133	-.0502	.0694	-.1093*	-.0410	-.0908*
V62 Most policemen abuse their authority	.0778*	-.0377	.0793*	-.0857*	-.0158	-.1160*
V70 Police used unreasonable force	-.0049	-.0327	-.0228	-.0901*	-.0820*	-.1011*
V74 Police often hassled kids	.1211*	-.0144	.1124*	-.0283	.0005	-.0510
Multiple R						

(continued)

Table I.6
(continued)

LPQ Authority Figures Scale Items	Number Promotions	Number Demotions	Number Commendations	Offenses		
				Number	Days Punished	Dollars Punished
d. General						
V35 Unsatisfactory relationship with boss	.0613	.0040	-.0108	-.0039	.0159	.0376
V50 Resisted being bossed	.0631	.0018	.0569	-.0194	-.0168	-.0034
V67 Difficult to relax with authority	.0690	.0143	.1345*	-.0911*	-.0513	.0106
V78 Used marijuana least three occasions	-.0270	-.0893*	.0405	-.1780*	-.0812*	-.1200*
V81 Most retail clerks not very nice	.0162	.0502	.0522	.0017	.0615	.0015
V118 Drag raced	-.0056	-.0147	.0784*	-.0290	-.0618	-.0400
Multiple R						

*Statistically significant at the .05 level of significance.

I-9

APPENDIX J

Significant Results of Stepwise Multiple Regression Analyses
of Criterion Variables on Models Composed of Subscale Items

Table J.1

Statistically Significant Items Resulting from Stepwise
Multiple Regression of the Index of Overall Evaluation
on Models Composed of Subscale Items
for the Air Station Respondents*

1. Family Relationships Scale Items

   a. Family Structure Model
      V42   Parents separated/divorced

   b. Time Home Model
      V20   Evenings with my family
      V44   Stayed away from home

   c. Supportive Relationships Model
      V59   Parents valued my opinion
      V75   Parents included me in discussions (-)

   d. Strained Relationships Model
      V107 Got mad at parents

2. Early Maturity Scale Items

   a. Early Home Independence Model
      V5   Date for the first time (-)

   b. Early Institutional Involvement Model
      V33   Offices nominated in jr. high school

   c. Early Driving Model
      V7   Received my driver's permit (-)
      V14   Bought my first car (-)

3. Personal Competence Scale Items

   a. Academic Orientation Model
      V80   School learning came easy
      V109 Wrote letters

   b. Reading Model
      V104 Went to libraries
      V124 Read editorials
      V125 Read science fiction (-)

   c. Culture Model
      V111 Went to see plays

   d. Sports Model
      V105 Went boating (-)

4. Vocational Maturity Scale Items

   a. Career Preparation Model
      V90   Prior training in Navy area pursued

   b. Career Expectation Model
      V85   Heard Navy schools are good
      V92   Promised advance after boot camp (-)

(continued)

5. Adaptability Model

    a. Group Activities Model
        V121   Did volunteer work

    b. Parental Model
        V61   Parents encouraged racial friends

    c. Group Leadership Model .
        V43   Among first students to learn events

    d. New Experiences Model
        V115   Made new friends

    e. Sociability Model
        V32   Friends of another racial group (-)
        V48   More comfortable working alone (-)
        V57   Little contact, other racial groups
        V96   No trouble fitting into crew (-)

6. Authority Figures Scale Items

    a. Parents Model
        V40   Parents often hassled me

    b. Teachers Model
        V18   Put out of classes by teachers

    c. Police Model
        V60   Best not to trust police

    d. General Authority Model
        V50   Resisted being bossed
        V67   Difficult to relax with authority
        V118   Drag raced

---

*The minus sign in parentheses (-) indicates that the item has an inverse relationship with the dependent variable.

Table J.2

Statistically Significant Items Resulting from Stepwise
Multiple Regression of the Rating Index on
Models Composed of Subscale Items
for the Air Station Respondents*

1. Family Relationships Scale Items

   b. Time Home Model
      V76   Stayed home only when nothing else to do

   c. Supportive Relationships Model
      V59   Parents valued my opinion

   d. Strained Relationships Model
      V107   Got mad at parents

2. Early Maturity Scale Items

   a. Early Home Independence Model
      V5   Date for the first time (-)

   b. Early Institutional Involvement Model
      V33   Offices nominated in jr. high school

   c. Early Driving Model
      V7   Received my driver's permit (-)
      V14   Bought my first car (-)

3. Personal Competence Scale Items

   a. Academic Orientation Model
      V80   School learning came easy
      V109   Wrote letters

   b. Reading Model
      V117   Read novels
      V124   Read editorials
      V125   Read science fiction (-)

   c. Culture Model
      V111   Went to see plays

   d. Sports Model
      V105   Went boating (-)

4. Vocational Maturity Scale Items

   a. Career Preparation Model
      V54   Best grades in math and/or science
      V90   Prior training in Navy area pursued

   b. Career Expectation Model
      V92   Promised advance after boot camp (-)

Table J.2
(continued)

5. Adaptability Model

   a. Group Activities Model
      V121 Did volunteer work

   b. Parental Model
      V61   Parents encouraged racial friends

   d. New Experiences Model
      V115 Made new friends

   e. Sociability Model
      V32   Friends of another racial group (-)
      V48   More comfortable working alone (-)
      V57   Little contact, other racial groups
      V96   No trouble fitting into crew (-)

6. Authority Figures Scale Items

   a. Parents Model
      V55   Resented discipline from parents

   b. Teachers Model
      V18   Put out of classes by teachers
      V21   Expelled/suspended from high school (-)
      V77   Teachers treated me fairly

   c. Police Model
      V70   Police used unreasonable force

   d. General Authority Model
      V50   Resisted being bossed
      V67   Difficult to relax with authority

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*The minus sign in parentheses (-) indicates that the item has an inverse relationship with the dependent variable.

Table J.3

Statistically Significant Items Resulting from Stepwise Multiple
Regression of the Index of Reenlistment Potential
on Models Composed of Subscale Items
for the Air Station Respondents*

1. Family Relationships Scale Items

    a. Family Structure Model
       V42   Parents separated/divorced

    b. Time Home Model
       V15   Doing something with parents (-)
       V20   Evenings with my family
       V44   Stayed away from home

    c. Supportive Relationships Model
       V59   Parents valued my opinion
       V75   Parents included me in discussions (-)
       V113 Worked on projects with parents

    d. Strained Relationships Model
       V107 Got mad at parents

    e. Family-Friends Model
       V31   Friends parents disapproved of

2. Early Maturity Scale Items

    b. Early Institutional Involvement Model
       V3   Attended summer camp (-)
       V33   Office nominated in jr. high school

    c. Early Driving Model
       V14   Bought my first car (-)

3. Personal Competence Scale Items

    a. Academic Orientation Model
       V38   Avoided difficult subjects
       V109 Wrote letters

    b. Reading Model
       V117 Read novels
       V125 Read science fiction (-)

    c. Culture Model
       V111 Went to see plays

    d. Sports Model
       V105 Went boating (-)

4. Vocational Maturity Scale Items

    a. Career Preparation Model
       V90   Prior training in Navy area pursued

    b. Career Expectation Model
       V39   Confident of ability to succeed
       V85   Heard Navy schools are good
       V92   Promised advance after boot camp (-)

(continued)

5. Adaptability Model

    b. Parental Model
        V61   Parents encouraged racial friends

    d. New Experiences Model
        V115 Made new friends

    e. Sociability Model
        V32   Friends of another racial group (-)
        V57   Little contact, other racial groups
        V96   No trouble fitting into crew (-)

6. Authority Figures Scale Items

    a. Parents Model
        V40   Parents often hassled me
        V55   Resented discipline from parents

    b. Teachers Model
        V23   Disputes with school officials
        V72   Respect for authority not shown (-)
        V79   Felt excluded from school activities

    c. Police Model
        V60   Best not to trust police

    d. General Authority Model
        V50   Resisted being bossed
        V81   Most retail clerks not very nice
        V118 Drag raced

---

*The minus sign in parentheses (-) indicates that the item has an inverse relationship with the dependent variable.

APPENDIX K

Stepwise Multiple Regression Results of Criterion Variables
on Models Composed of LPQ Subscales

Table K.1

Multiple Regression of Index of Overall Evaluation on Models
Composed of LPQ Subscales for the
Air Station Respondents

| | Regression Coefficients | |
LPQ Scales	Unstandardized	Standardized
Family Relationships Subscales		
Time Home 3	.9800*	.1568*
Family Projects 3	-.7608*	-.1224*
Got mad at parents	.6517*	.1369*
Constant Term	343.1817	
Multiple R	.2371	
Multiple R^2	.0562	
Adjusted Multiple R^2	.0481	
Number of Cases	352	
Early Maturity Subscales		
Offices nominated in jr. high school	.6116*	.1308*
Early Driving 3	-.9536*	-.1596*
Constant Term	465.7844	
Multiple R	.2149	
Multiple R^2	.0462	
Adjusted Multiple R^2	.0407	
Number of Cases	348	
Personal Competence Subscales		
Academic Orientation 3	1.0163*	.1381*
Went to see plays	.5604*	.1162*
Went boating	-.3704*	-.0772*
Constant Term	310.7233	
Multiple R	.2100	
Multiple R^2	.0441	
Adjusted Multiple R^2	.0359	
Number of Cases	353	

(continued)

LPQ Scales	Regression Coefficients	
	Unstandardized	Standardized

Vocational Maturity Subscales

Career Preparation 3	.8413*	.1266*

Constant Term	346.7892
Multiple R	.1266
Multiple R^2	.0160
Adjusted Multiple R^2	.0132
Number of Cases	355

Adaptability Subscales

Did volunteer work	.4286*	.0896*
Parents encouraged racial friends	.6767*	.1428*
New Experiences 3	.7581*	.1208*
Sociability 3	-2.1434*	-.2653

Constant Term	458.6821
Multiple R	.3223
Multiple R^2	.1039
Adjusted Multiple R^2	.0934
Number of Cases	347

Authority Figures Subscales

Parents 3	.5053*	.0874*
Teachers 3	1.7118*	.2103*

Constant Term	208.7092
Multiple R	.2463
Multiple R^2	.0607
Adjusted Multiple R^2	.0552
Number of Cases	345

*Statistically significant at the .05 level of significance.

Table K.2

Multiple Regression of Rating Index on Models Composed of
LPQ Subscales for the Air Station Respondents

| | Regression Coefficients | |
LPQ Scales	Unstandardized	Standardized
Family Relationships Subscales		
Time Home 3	.0104*	.0896*
Got mad at parents	.0122*	.1381*
Constant Term	1.5779	
Multiple R	.1897	
Multiple R^2	.0360	
Adjusted Multiple R^2	.0305	
Number of Cases	352	
Early Maturity Subscales		
Offices nominated in jr. high school	.0084*	.0964*
Early Driving 3	-.0186*	-.1665*
Constant Term	4.8776	
Multiple R	.1995	
Multiple R^2	.0398	
Adjusted Multiple R^2	.0342	
Number of Cases	348	
Personal Competence Subscales		
Academic Orientation 3	.0166*	.1206*
Went to see plays	.0097*	.1082*
Went boating	-.0088*	-.0981*
Constant Term	2.1091	
Multiple R	.2017	
Multiple R^2	.0407	
Adjusted Multiple R^2	.0324	
Number of Cases	353	

LPQ Scales	Regression Coefficients	
	Unstandardized	Standardized

Vocational Maturity Subscales

Career Preparation 3	.0184*	.1483*

Constant Term	2.0110	
Multiple R	.1483	
Multiple R^2	.0220	
Adjusted Multiple R^2	.0192	
Number of Cases	355	

Adaptability Subscales

Did volunteer work	.0076*	.0859*
Parents encouraged racial friends	.0086*	.0971*
New Experiences 3	.0142*	.1213*
Sociability 3	-.0353*	-.2352*

Constant Term	4.3463	
Multiple R	.2787	
Multiple R^2	.0777	
Adjusted Multiple R^2	.0669	
Number of Cases	347	

Authority Figures Subscales

Parents 3	.0113*	.1055*
Teachers 3	.0275*	.1814*

Constant Term	-.0446	
Multiple R	.2307	
Multiple R^2	.0532	
Adjusted Multiple R^2	.0477	
Number of Cases	345	

*Statistically significant at the .05 level of significance.

Table K.3

Multiple Regression of Index of Reenlistment Potential
on Models Composed of LPQ Subscales for the
Air Station Respondents

	Regression Coefficients	
LPQ Scales	Unstandardized	Standardized

Family Relationships Subscales

Family Structure	.0125*	.1108*
Time Home 3	.0205*	.1453*
Family Projects 3	-.0188*	-.1342*
Got mad at parents	.0123*	.1143*
Constant Term	1.1782	
Multiple R	.2476	
Multiple R^2	.0613	
Adjusted Multiple R^2	.0505	
Number of Cases	352	

Early Maturity Subscales

Offices nominated in jr. high school	.0099*	.0941*
Early Driving 3	-.0175*	-.1293*
Constant Term	4.6162	
Multiple R	.1663	
Multiple R^2	.0277	
Adjusted Multiple R^2	.0220	
Number of Cases	348	

Personal Competence Subscales

Academic Orientation 3	.0268*	.1609*
Went boating	-.0106*	-.0976*
Constant Term	2.2382	
Multiple R	.1861	
Multiple R^2	.0347	
Adjusted Multiple R^2	.0291	
Number of Cases	353	

(continued)

Table K.3
(continued)

LPQ Scales	Regression Coefficients	
	Unstandardized	Standardized

Vocational Maturity Subscales

	Unstandardized	Standardized
Career Preparation 3	-.0196*	.1307*
Constant Term	1.8883	
Multiple R	.1307	
Multiple R^2	.0171	
Adjusted Multiple R^2	.0143	
Number of Cases	355	

Adaptability Subscales

	Unstandardized	Standardized
Parents encouraged racial friends	.0090*	.0837*
New Experiences 3	.0218*	.1536*
Sociability 3	-.0391*	-.2137*
Constant Term	4.6784	
Multiple R	.2528	
Multiple R^2	.0639	
Adjusted Multiple R^2	.0557	
Number of Cases	347	

Authority Figures Subscales

	Unstandardized	Standardized
Parents 3	.0142*	.1091*
Teachers 3	.0222*	.1210*
General Authority 3	.0225*	.1154*
Constant Term	-2.0685	
Multiple R	.2542	
Multiple R^2	.0646	
Adjusted Multiple R^2	.0564	
Number of Cases	345	

*Statistically significant at the .05 level of significance.

APPENDIX L

Stepwise Multiple Regression Results of Criterion Variables
on LPQ Subscales and Items

Table L.1

Multiple Regression of the Overall Evaluation Index on LPQ
Subscales and Items for Air Station Respondents

Variables in Regression Model	Regression Coefficients	
	Unstandardized	Standardized
Family Relationships		
Time Home	.5501*	.0878*
Got mad at parents	.5644*	.1183*
Family Project 3	-.7125*	-.1149*
Early Maturity		
Early Driving 3	-.8175*	-.1388*
Personal Competence		
Went to see plays	.5803*	.1197*
Adaptability		
Parents encouraged racial friends	.3446*	.0729*
New Experiences 3	.8343*	.1326*
Sociability 3	-2.0678*	-.2590*
Vocational Maturity		
Career Preparation 3	.7339*	.1102*
Authority Figures		
Teachers 3	1.2615*	.1542*
Constant Term	303.2399	
Multiple R	.4620*	
Multiple R^2	.2135	
Adjusted Multiple R^2	.1894	
Number of Cases	338	

*Statistically significant at the .05 level of significance.

Table L.2

Multiple Regression of the Rating Index on LPQ Subscales
and Items for Air Station Respondents

	Regression Coefficients	
Variables in Regression Model	Unstandardized	Standardized
Family Relationships		
Got mad at parents	.1119*	.1345*
Early Maturity		
Early Driving 3	-.0197*	-.1797*
Personal Competence		
Read science fiction	-.0096*	-.1076*
Went to see plays	.0136*	.1510*
Adaptability		
New Experiences 3	.1689*	.1445*
Sociability 3	-.3546*	-.2390*
Vocational Maturity		
Career Preparation 3	.0158*	.1279*
Authority Figures		
Teachers 3	.0230*	.1508*
Constant Term	2.2016	
Multiple R	.4360*	
Multiple R^2	.1901	
Adjusted Multiple R^2	.1704	
Number of Cases	338	

*Statistically significant at the .05 level of significance.

Table L.3

Multiple Regression of the Index of Reenlistment Potential on LPQ Subscales and Items for Air Station Respondents

| | Regression Coefficients | |
Variables in Regression Model	Unstandardized	Standardized
Family Relationships		
Family Structure	.0131*	.1164*
Got mad at parents	.0108*	.1000*
Family Projects 3	-.0126*	-.0900*
Early Maturity		
Early Driving 3	-.0200*	-.1504*
Personal Competence		
Read science fiction	-.0153*	-.1424*
Went to see plays	.0136*	.1240*
Adaptability		
New Experiences 3	.0236*	.1664*
Sociability 3	-.0383*	-.2123*
Vocational Maturity		
Career Preparation 3	.0166*	.1108*
Authority Figures		
Teachers 3	.0185*	.1007*
General Authority 3	.0235*	.1193*
Constant Term	.4669	
Multiple R	.4423*	
Multiple R^2	.1956	
Adjusted Multiple R^2	.1685	
Number of Cases	338	

*Statistically significant at the .05 level of significance.

APPENDIX M

Stepwise Multiple Regression Results of
Performance and/or Criterion Variables on LPQ Scales

Table M.1

Regression Coefficients in Standard Form for the Multiple
Regression of Indices of Professional Performances,
Military Behavior, Military Appearance, and
Adaptability on the LPQ Scales for
the Air Station Respondents

LPQ Scales	Index of Professional Performance	Index of Military Behavior	Index of Military Appearance	Index of Adaptability
FAM3	.0986*	.0715	.0279	.1155*
EMAT3	.1140*	.1362*	.1304*	.1558*
COMP3	.0821*	.0728*	.1651*	.1193*
ADAPT3	.2450*	.1727*	.2223*	.1645*
VMAT3	.1371*	.0615	.0517	.1280*
AUTH3	.1539*	.1991*	.2109*	.1287*
Multiple R	.3749	.3331	.3914	.3410
Multiple R^2	.1406	.1109	.1532	.1163
Adjusted Multiple R^2	.1251	.0950	.1380	.1004
Number of Cases	341	341	341	341

*Statistically significant at the .05 level of significance.

Table M.3

Multiple Regression of the Rating Index on the LPQ
Scales for the Air Station Respondents

	Regression Coefficients	
LPQ Scales	Unstandardized	Standardized
FAM3	.0144*	.0721*
EMAT3	.0185*	.1690*
COMP3	.0227*	.1566*
ADAPT3	.0373*	.1936*
VMAT3	.0147*	.1188*
AUTH3	.0342*	.1817*
Constant Term	-10.3362	
Multiple R	.3927	
Multiple R^2	.1542	
Adjusted Multiple R^2	.1390	
Number of Cases	340	

*Statistically significant at the .05 level of significance.

APPENDIX N

Stepwise Multiple Regression Results of Criterion Variables
on LPQ3 and SCREEN Score

Table N.1

Multiple Regression of the Index of Overall Evaluation
on LPQ3 and the SCREEN Score for the
Air Station Respondents

| | Regression Coefficients | |
	Unstandardized	Standardized
LPQ3	7.3431*	.3547*
Screen Score	-.0353	-.0060
Constant Term	-301.7092	
Multiple R	.3549	
Multiple R^2	.1259	
Adjusted Multiple R^2	.1184	
Number of Cases	232	

*Statistically significant at the .05 level of significance.

Table N.3

Multiple Regression of the Index of Reenlistment Potential
on LPQ3 and the SCREEN Score for the
Air Station Respondents

| | Regression Coefficients | |
	Unstandardized	Standardized
LPQ3	.1674*	.3584*
Screen Score	-.0058	.0434
Constant Term	-13.3966	
Multiple R	.3601	
Multiple R^2	.1296	
Adjusted Multiple R^2	.1222	
Number of Cases	236	

*Statistically significant at the .05 level of significance.

APPENDIX O

Regression Coefficients for Multiple Regression of
Indices of Performance and/or Criterion Variables on Demographic Items

Table O.1:   Regression Coefficients in Standard Form for the Multiple Regression of the Index of Professional Performance on Models Consisting of LPQ3, Race, Sex, Education, Marital Status and Number of Children for the Air Station Respondents

Table O.2:   Regression Coefficients in Standard Form for the Multiple Regression of the Index of Military Behavior on Models Consisting of LPQ3, Race, Sex, Education, Marital Status and Number of Children for the Air Station Respondents

Table O.3:   Regression Coefficients in Standard Form for the Multiple Regression of the Index of Adaptability on Models Consisting of LPQ3, Race, Sex, Education, Marital Status and Number of Children for the Air Station Respondents

Table O.4:   Regression Coefficients in Standard Form for the Multiple Regression of the Index of Military Appearance on Models Consisting of LPQ3, Race, Sex, Education, Marital Status and Number of Children for the Air Station Respondents

Table O.5:   Regression Coefficients in Standard Form for the Multiple Regression of the Index of Overall Evaluation on Models Consisting of LPQ3, Race, Sex, Education, Marital Status and Number of Children for the Air Station Respondents

Table O.6:   Regression Coefficients in Standard Form for the Multiple Regression of the Rating Index on Models Consisting of LPQ3, Race, Sex, Education, Marital Status and Number of Children for the Air Station Respondents

Table O.7:   Regression Coefficients in Standard Form for the Multiple Regression of the Index of Reenlistment Potential on Models Consisting of LPQ3, Race, Sex, Education, Marital Status and Number of Children for the Air Station Respondents

Table 0.1

Regression Coefficients in Standard Form for the Multiple Regression
of the Index of Professional Performance on Models Consisting of
LPQ3, Race, Sex, Education, Marital Status, and Number of
Children for the Air Station Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ3	.3594*	.3818	.3341*	.3268*
Race	.0560	.0721	.0697	.0939*
Sex		-.0805	-.0628	-.0433
Education			.0980*	.1176*
AFQT			.0134	.0148
Marital Status				-.0084
Number Children				.1290*
Multiple R	.3538	.3620	.3485	.3678
Multiple R^2	.1252	.1310	.1214	.1353
Adjusted Multiple R^2	.1197	.1228	.1074	.1158
Number of Cases	320	320	319	319

*Statistically significant at the .05 level of significance.

Table 0.2

Regression Coefficients in Standard Form for the Multiple Regression
of the Index of Military Behavior on Models Consisting of LPQ3,
Race, Sex, Education, Marital Status, and Number of
Children for the Air Station Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ3	.3308	.3509*	.2876*	.2776*
Race	.0320	.0463	.0746	.1089*
Sex		-.0720	-.0639	-.0336
Education			.1118*	.1395*
AFQT			-.0789	-.0750
Marital Status				-.0396
Number Children				.1969*
Multiple R	.3266	.3337	.3231	.3629
Multiple R^2	.1067	.1114	.1044	.1317
Adjusted Multiple R^2	.1011	.1030	.0901	.1121
Number of Cases	320	320	319	319

*Statistically significant at the .05 level of significance.

Table 0.3

Regression Coefficients in Standard Form for the Multiple Regression
of the Index of Adaptability on Models Consisting of LPQ3,
Race, Sex, Education, Marital Status, and Number of
Children for the Air Station Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ3	.3472*	.3663*	.3268*	.3202*
Race	.0127	.0263	.0338	.0550
Sex		-.0684	-.0531	-.0380
Education			.0285	.0456
AFQT			-.0364	-.0365
Marital Status				.0128
Number Children				.1029*
Multiple R	.3452	.3513	.3263	.3433
Multiple R^2	.1192	.1234	.1065	.1179
Adjusted Multiple R^2	.1136	.1151	.0922	.0980
Number of Cases	320	320	319	319

*Statistically significant at the .05 level of significance.

Table 0.4

Regression Coefficients in Standard Form for the Multiple Regression
of the Index of Military Appearance on Models Consisting of LPQ3,
Race, Sex, Education, Marital Status, and Number of
Children for the Air Station Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ3	.3874*	.3686*	.3259*	.3222*
Race	.0436	.0301	.0243	.0382
Sex		.0674	.0862*	.1015*
Education			.0647	.0761
AFQT			.0145	.0181
Marital Status				-.0458
Number Children				.0955
Multiple R	.3822	.3875	.3684	.3752
Multiple R^2	.1460	.1501	.1357	.1407
Adjusted Multiple R^2	.1407	.1421	.1219	.1214
Number of Cases	320	320	319	319

*Statistically significant at the .05 level of significance.

Table 0.5

Regression Coefficients in Standard Form for the Multiple Regression
of the Index of Overall Evaluation on Models Consisting of LPQ3,
Race, Sex, Education, Marital Status, and Number of
Children for the Air Station Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ3	.4108*	.4239*	.3693*	.3612*
Race	.0330	.0422	.0502	.0772
Sex		-.0467	-.0300	-.0074
Education			.0873*	.1092*
AFQT			-.0268	-.0248
Marital Status				-.0159
Number Children				.1478*
Multiple R	.4063	.4087	.3860	.4078
Multiple R^2	.1650	.1670	.1490	.1663
Adjusted Multiple R^2	.1598	.1591	.1354	.1474
Number of Cases	320	320	318	318

*Statistically significant at the .05 level of significance.

Table 0.6

Regression Coefficients in Standard Form for the Multiple
Regression of the Rating Index on Models Consisting of
LPQ3, Race, Sex, Education, Marital Status, and Number
of Children for the Air Station Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ3	.3991*	.4256*	.3758*	.3691*
Race	.0610	.0797* .	.0678	.0875*
Sex		-.0947*	-.0727	-.0613
Education			.0853*	.1013*
AFQT			.0376	.0355
Marital Status				.0413
Number Children				.0823
Multiple R	.3929	.4030	.3824	• .3978
Multiple R^2	.1543	.1624	.1463	.1582
Adjusted Multiple R^2	.1490	.1545	.1326	.1392
Number of Cases	320	320	318	318

*Statistically significant at the .05 level of significance.

Table 0.7

Regression Coefficients in Standard Form for the Multiple Regression
of the Index of Reenlistment Potential on Models Consisting of LPQ3,
Race, Sex, Education, Marital Status, and Number of
Children for the Air Station Respondents

	Model 1	Model 2	Model 3	Model 4
LPQ3	.3967*	.4173*	.3651*	.3551*
Race	.0696	.0842*	.0830*	.1129*
Sex		-.0739	-.0544	-.0362
Education			.0644	.0887*
AFQT			-.0048	-.0362
Marital Status				.0534
Number Children				.1291*
Multiple R	.3903	.3966	..3664	.4008
Multiple R^2	.1523	.1573	.1342	.1606
Adjusted Multiple R^2	.1470	.1493	.1204	.1417
Number of Cases	320	320	318	318

*Statistically significant at the .05 level of significance.

APPENDIX P

Graphic Descriptions of Indices of Supervisors' Evaluations
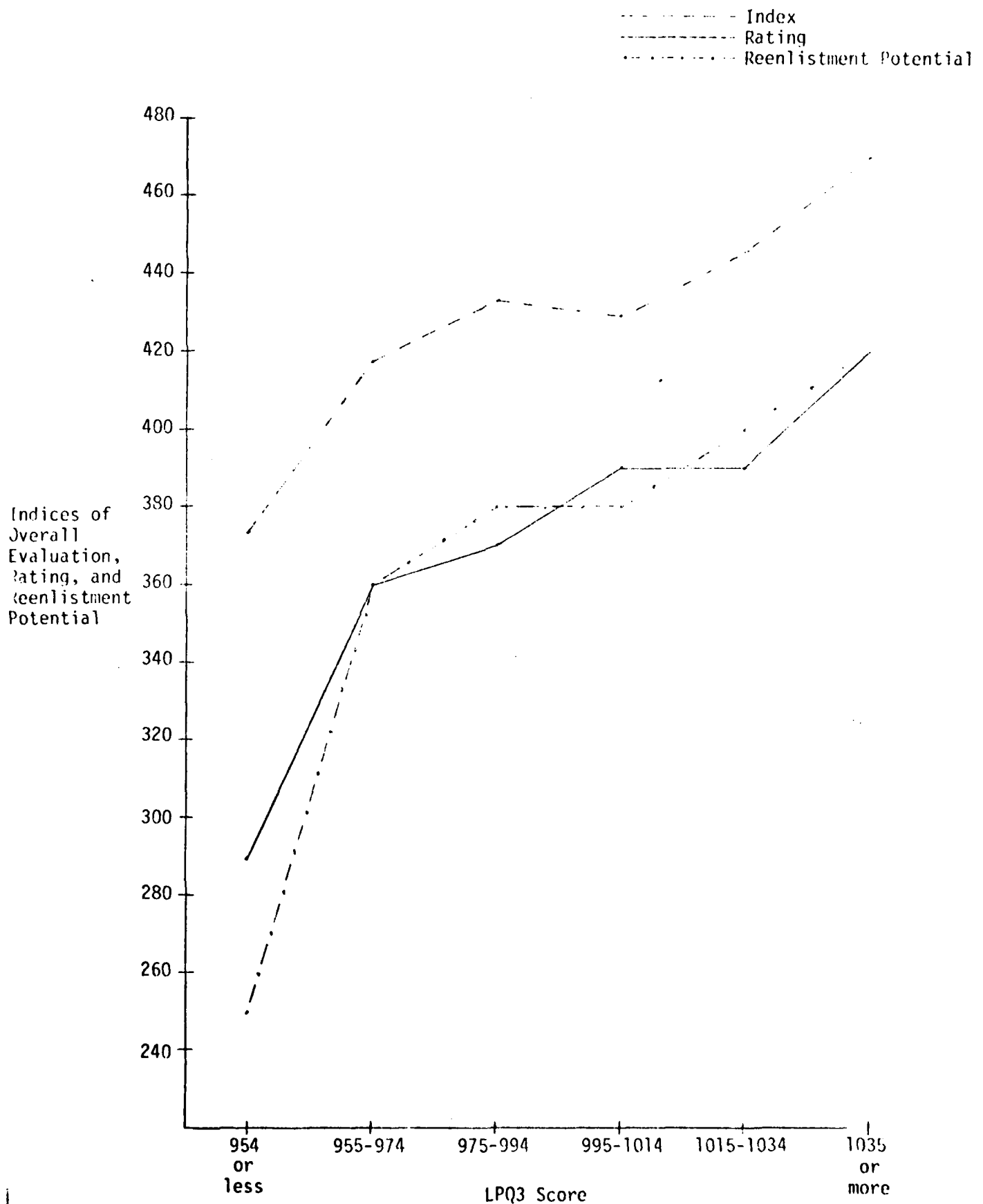and the Three General Measures of Military Performance

Figure P.1: Indices of overall evaluation, rating, and reenlistment potential.
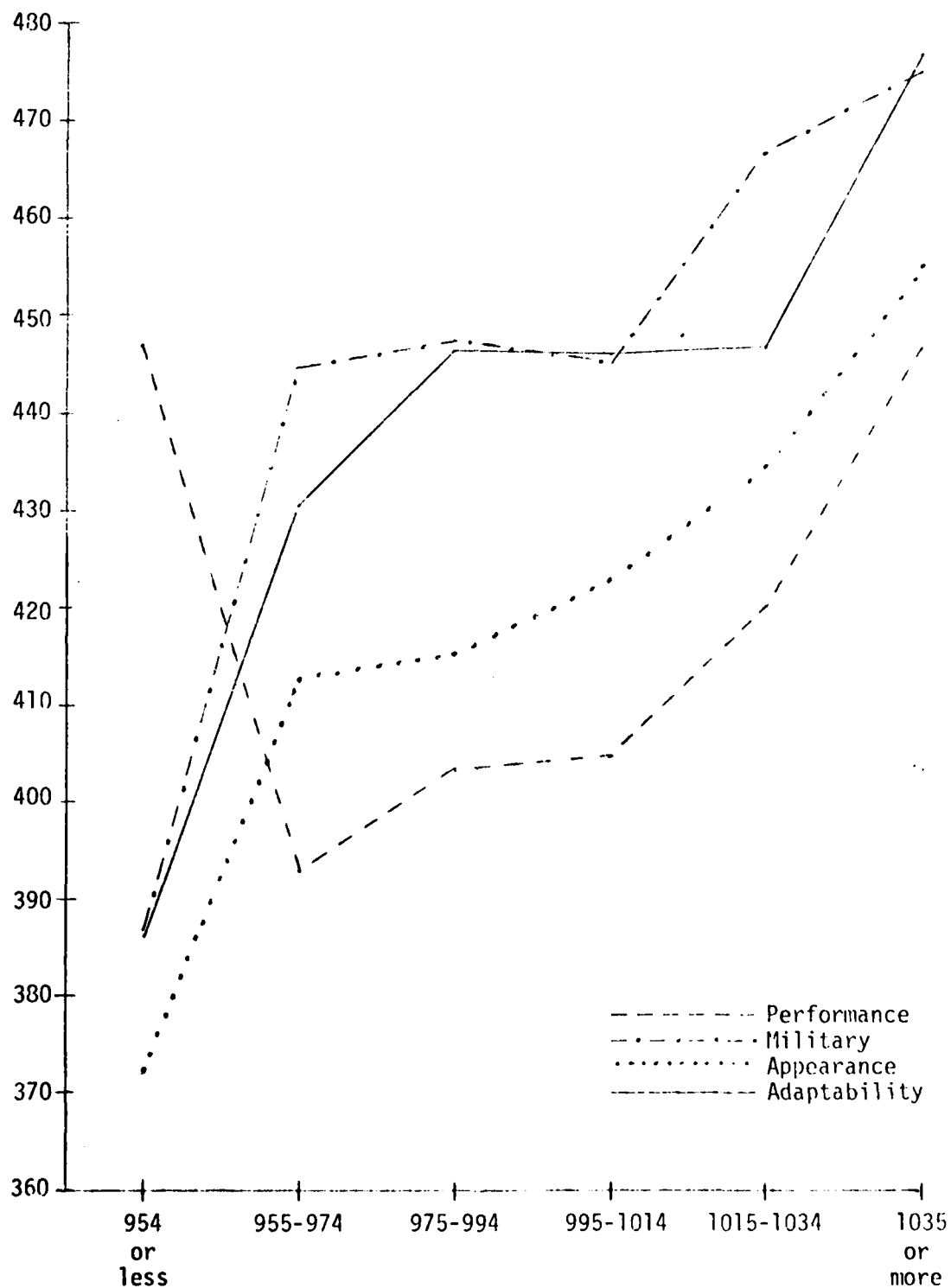
Figure P.2 Indices of professional performance, military behavior, military appearance, and adaptability by LPQ score for the air station respondents.
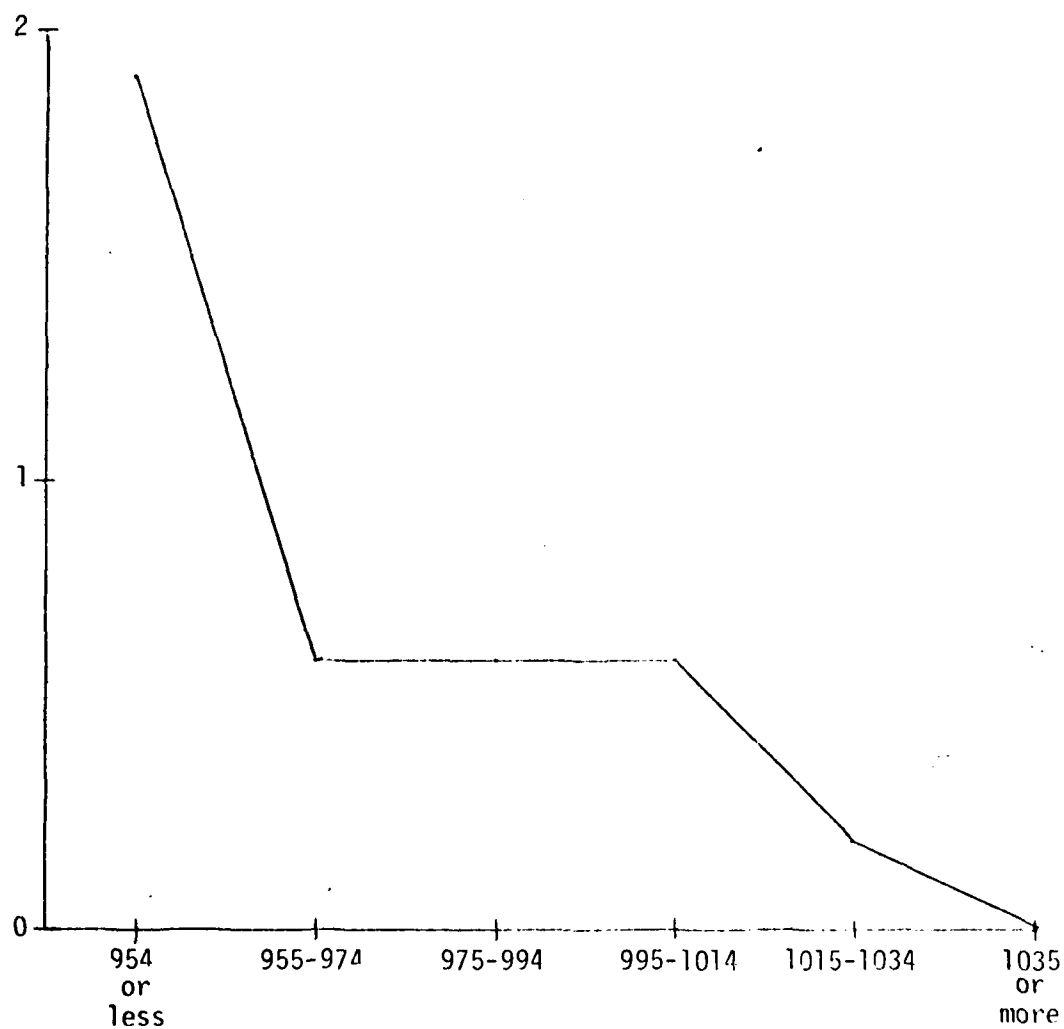
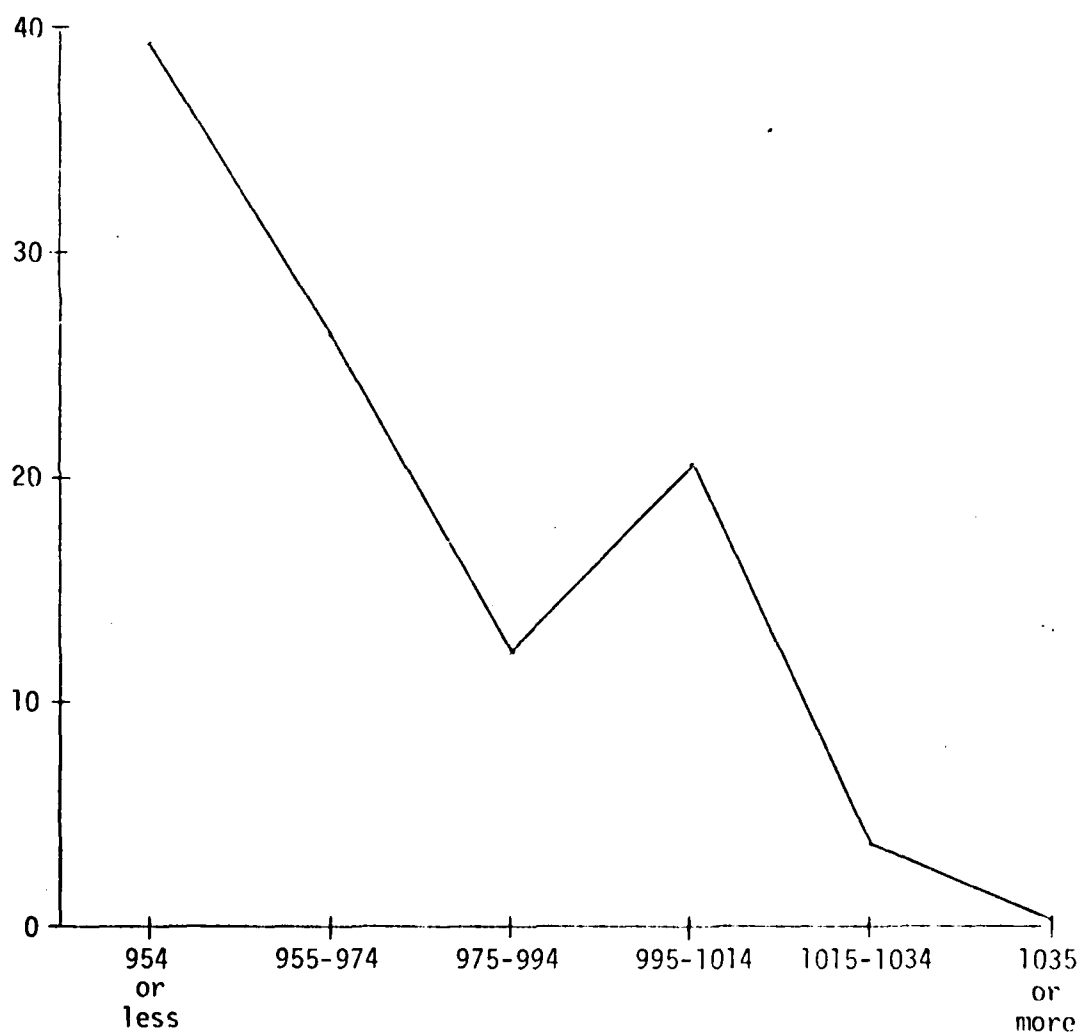Figure P.3: Number of offenses by LPQ score for the air station respondents.

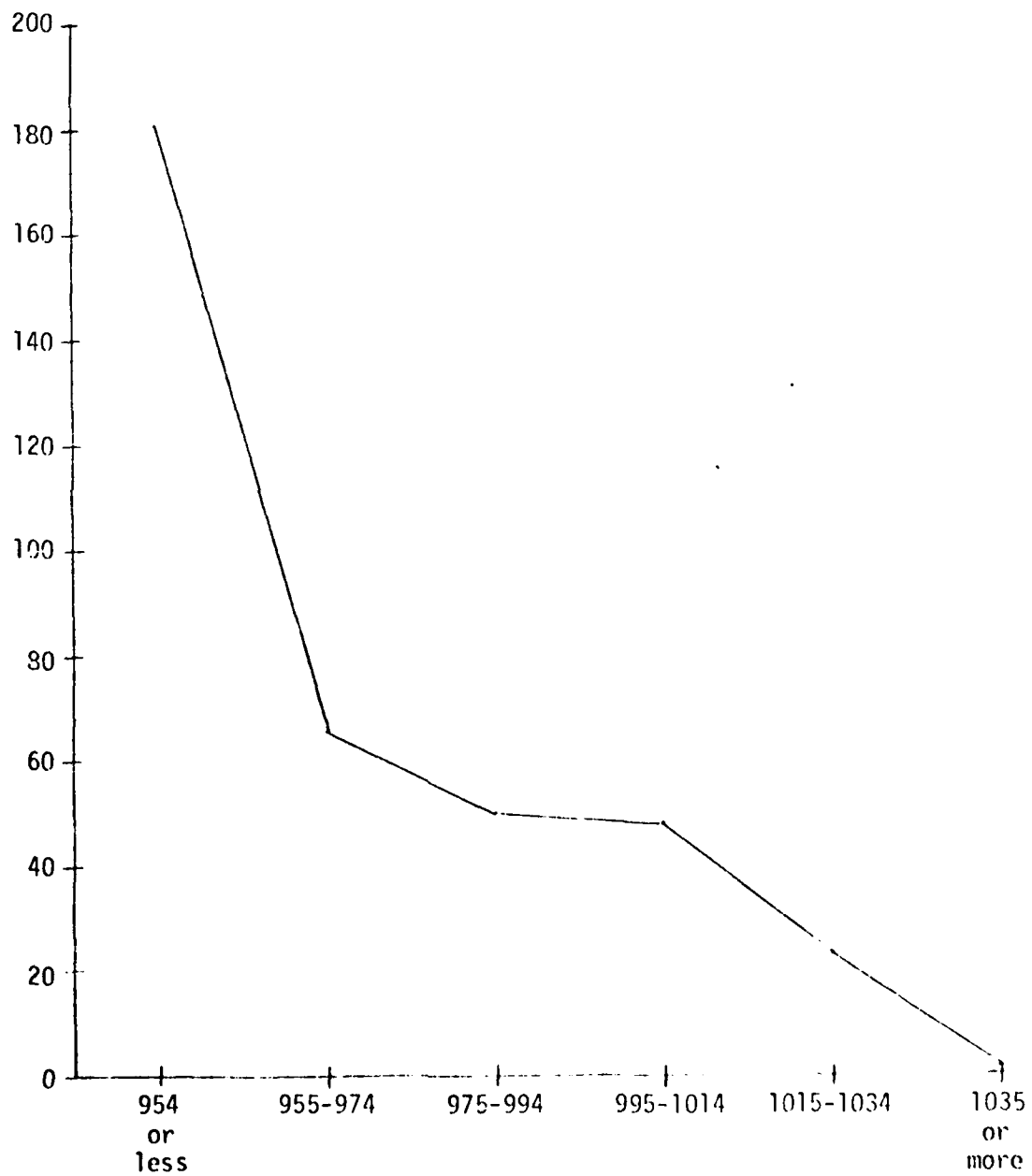Figure P.4   Number of days punished by LPQ score for the air station
respondents.

Figure P.5   Number of dollars punished by LPQ score for the air station respondents.